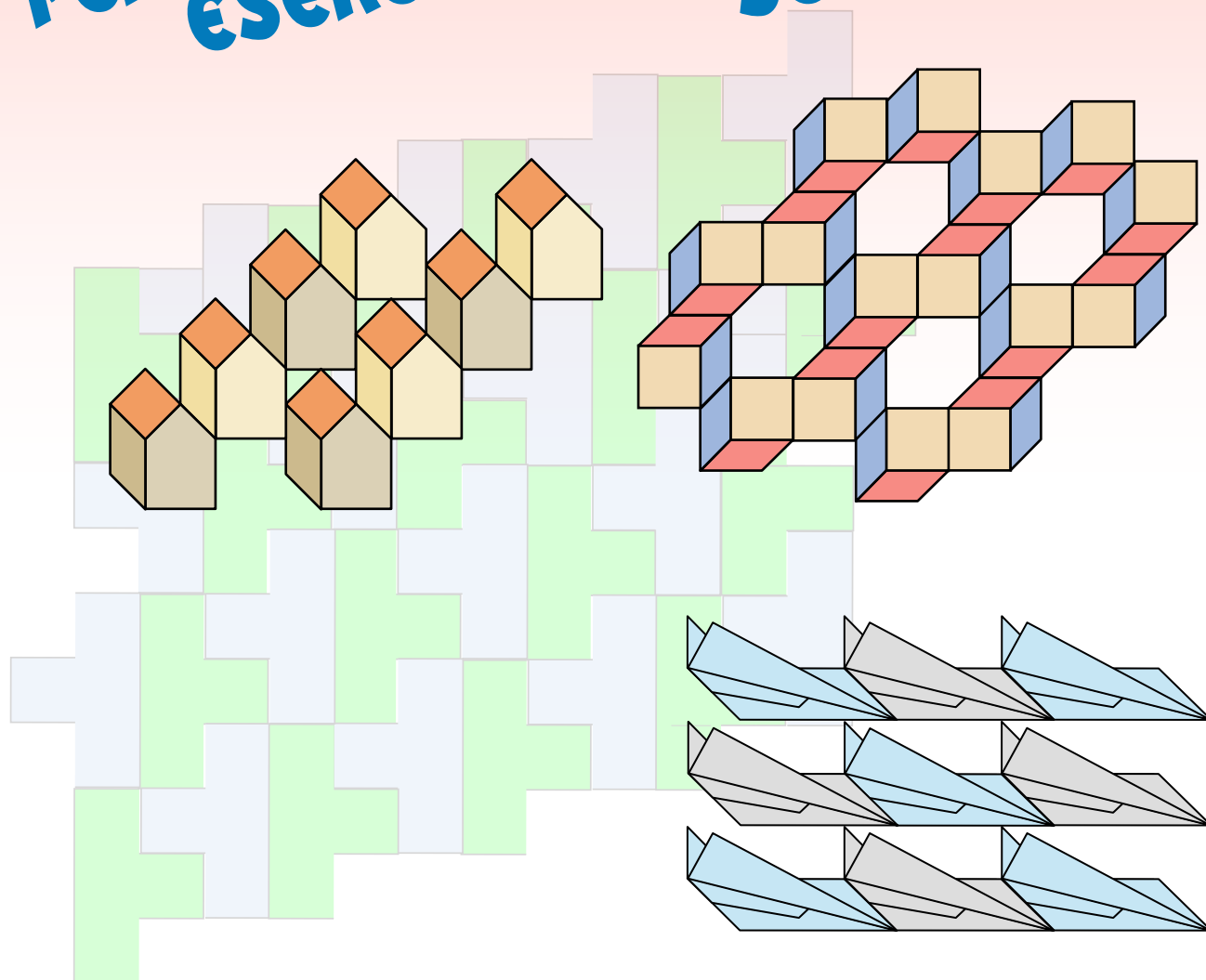


Laboratori di composizione modulare per ragazzi da 8 a 14 anni

13 MODULI ORIGAMI AGGREGABILI

PER ESERCITAZIONI
SCOLASTICHE



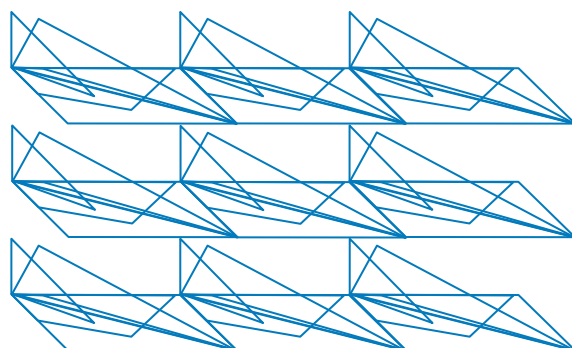
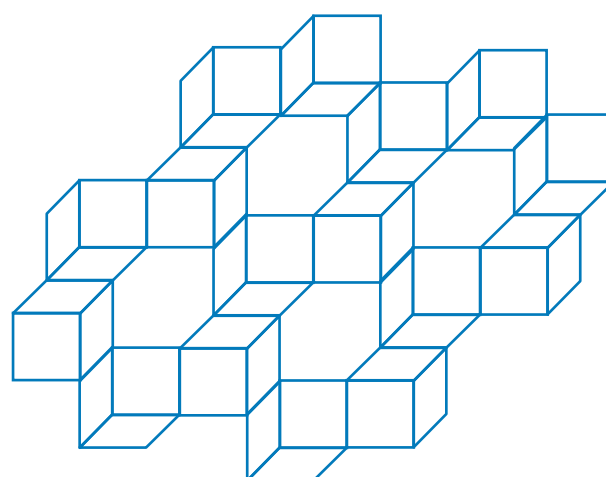
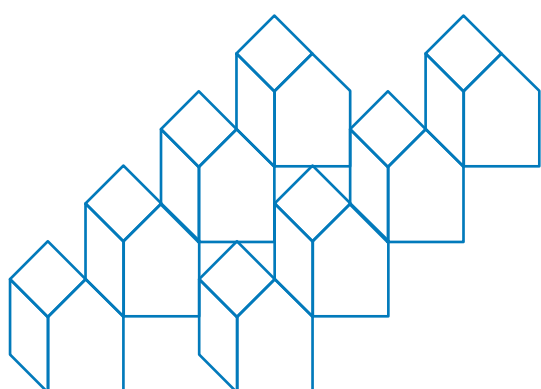
Franco Pavarin

www.aereiemaschereorigami.altervista.org

Laboratori di composizione modulare per ragazzi da 8 a 14 anni

14 MODULI ORIGAMI AGGREGABILI

PER ESERCITAZIONI
SCOLASTICHE



Franco Pavarin

INTRODUZIONE

In questo testo propongo la creazione di laboratori di origami sociale per scolari con un'età dagli 8 ai 14 anni.

Per origami sociale intendo attività basate sull'origami adatte ad un largo pubblico, particolarmente indicate non solo per un fine educativo ma anche a scopo ludico, in strutture sanitarie e ricreative, ove, con l'aiuto di un insegnante o un animatore, possono sviluppare la capacità di rielaborazione personale.

Ad esempio, l'apprendimento della tecnica di costruzione di un mattone non è che la base di partenza per la realizzazione di un edificio, che ogni piegatore realizzerà in modo originale e personale, con conseguente sviluppo delle proprie capacità non solo manuali, ma anche logico-creative.

Nel testo le esercitazioni proposte sono di difficoltà crescente: tutti i moduli sono di facile costruzione ma i primi sono stati pensati per i ragazzi più piccoli, perchè consentono solo la realizzazione di aggregazioni modulari semplici.

Tralascio in questo mio lavoro la parte della programmazione disciplinare, poichè penso debba essere l'insegnante a stabilire la durata dell'unità didattica e gli obiettivi da raggiungere: precisione, originalità, qualità del disegno ecc.

L'attività che propongo si dovrebbe sviluppare nel seguente modo:

1) Nella lezione introduttiva l'insegnante illustra adeguatamente alla lavagna il concetto di modularità, con esempi di aggregabilità per forma (varie disposizioni di mattonelle 2x1), o per ripetizione di colore (es. quadrato rosso+verde+azzurro, poi ancora rosso+verde+azzurro) o per dislocazione logica (2 quadrati+spazio, 2 quadrati+spazio).

2) Per gli alunni più piccoli l'insegnante consegna 4-5 moduli; per gli altri ne spiega il procedimento costruttivo.

Ogni alunno dovrà disporre di fogli A3 a quadrati grandi estraibili dai quaderni in vendita anche nei supermercati.

3) Ogni alunno posiziona i moduli sui fogli cercando di formare aggregazioni modulari logiche.

4) Ogni alunno riporta sul foglio mediante matite colorate o pennarelli, a discrezione dell'insegnante, le composizioni realizzate.

Al termine dell'esercitazione l'insegnante ritira i moduli e gli elaborati e valuta in relazione agli obiettivi prefissati.

La metodologia di lavoro proposta è illustrata nella successiva tabella.

Novembre 2016

Franco Pavarin

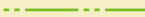
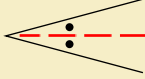
METODOLOGIA DI LAVORO

Per la costruzione dei moduli si adopera carta monocolora di 2 o più colori differenti.
L'aggregazione avviene ponendo a contatto i moduli almeno per un vertice.
Nella composizione modulare sono sempre consentiti gli spazi vuoti.

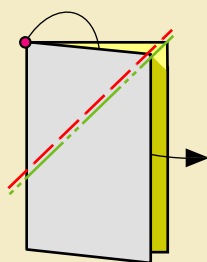
TIPOLOGIE DI AGGREGAZIONE

A1	Modulo	+	modulo						
A2	"	+	"	ruotato di	90°				
A3	"	+	"	" "	180°				
A4	"	+	"	" "	270°				
B1	Modulo	+	modulo ribaltato su asse verticale						
B2	"	+	"	"	ruotato di 90°				
B3	"	+	"	" "	180°				
B4	"	+	"	" "	270°				
C1	Modulo composto	+	modulo composto	1 (formato da 4 moduli di 2 colori ruotati di 90° rispetto al precedente)					
C2	"	"	+	"	composto	2 (di tipo differente)			
C3	"	"	+	"	"	3 " " "			
C4	"	"	+	"	"	4 " " "			
C5	"	"	+	"	"	5 " " "			
D1	Modulo	+	modulo compenetrato						
D2	"	+	"	"	ruotato di 90°				
D3	"	+	"	"	" di 180°				
D4	"	+	"	"	" di 270				
E1	Modulo composto	1	+	diverso tipo di mod. composto	2				
E2	"	"	"	+	" " " "	" ruotato di 90°			
E3	"	"	"	+	" " " "	" " " 180°			
E4	"	"	"	+	" " " "	" " " 270°			

Simbologia origami

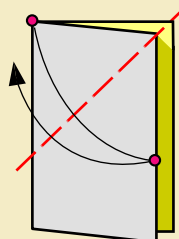
		Indicazione	Risultato 3D
	Piega a valle (piega bassa)		
	Piega a monte (piega alta)		
	Ruotate e piegate		
	Ruotate, piegate e riportate alla posizione iniziale		
	Ribaltate sull'asse verticale		
	Ribaltate sull'asse orizzontale		
	Ruotate di 180°		
	Piega bisettrice a valle		
	Figura ingrandita		

Realizzazione delle pieghe rovesce



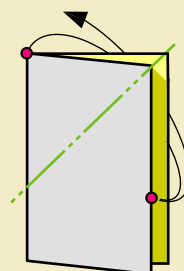
1

Eseguite una piega rovescia interna



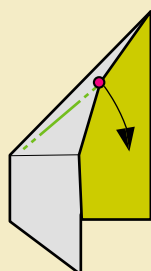
2

Una piega a valle



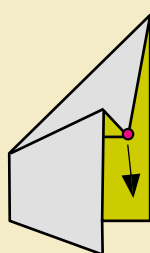
3

Ripiegate con piega a monte sulla medesima traccia



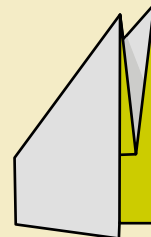
4

Aprite e rovesciate il verso della piega



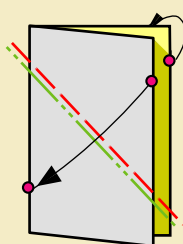
5

Inserite all'interno il vertice indicato



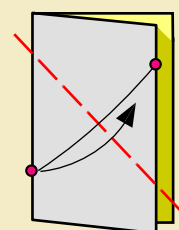
6

Piega rovescia interna ultimata



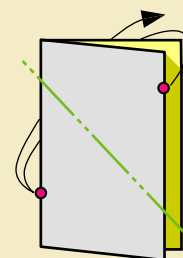
1

Eseguite una piega rovescia esterna



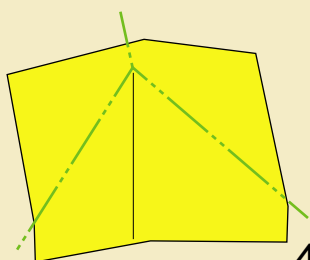
2

Una piega a valle



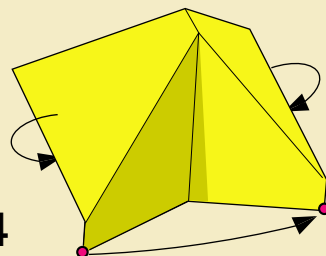
3

Ripiegate con piega a monte sulla medesima traccia



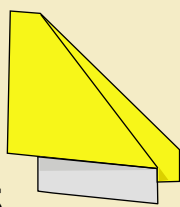
4

Aprite e rovesciate il verso della piega



5

Richiudete



6

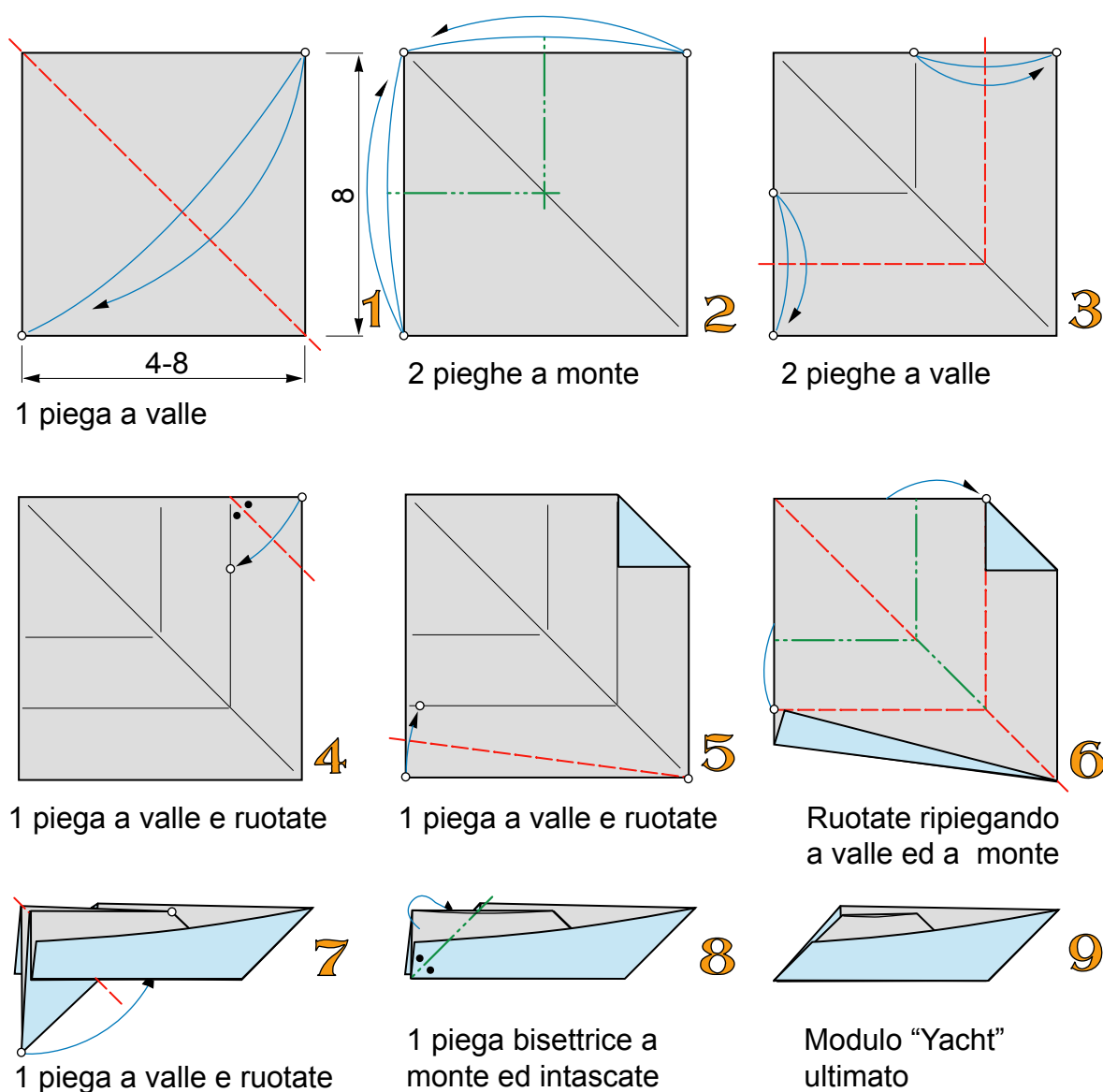
Piega rovescia esterna ultimata

MODULO "YACHT"

Per questo semplice modulo ho eseguito aggregazioni logiche di tipo A1, B1 e C1: moduli semplici, ribaltati e composti.

Non considero logico formare aggregazioni con moduli ruotati.

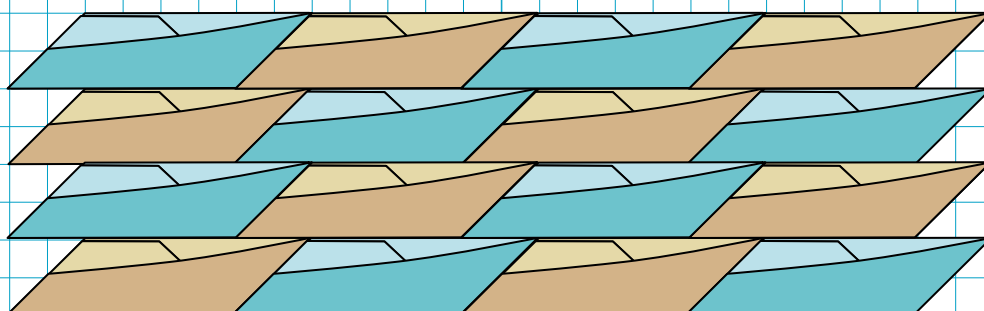
Adoperate fogli quadrati mono o bicolori di 2 colori differenti, di cm 8 di lato



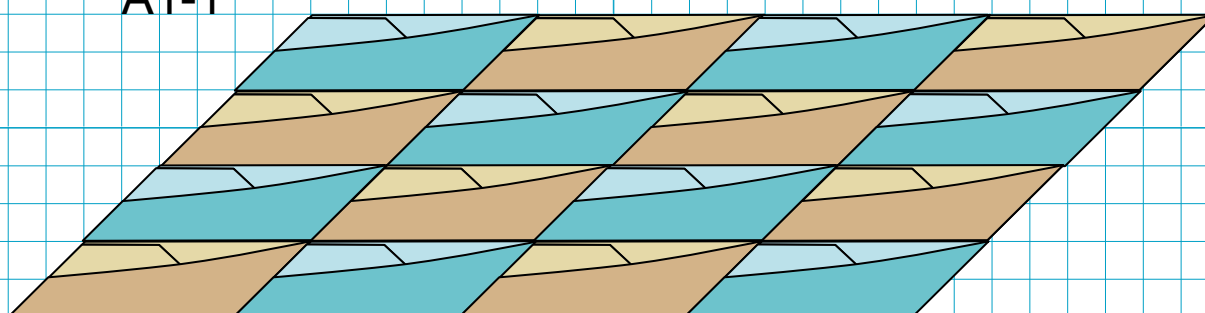
YACHT - COMPOSIZIONI MODULARI

A=2 MODULI BASE

$$A1 = \text{[Blue Module]} + \text{[Orange Module]}$$



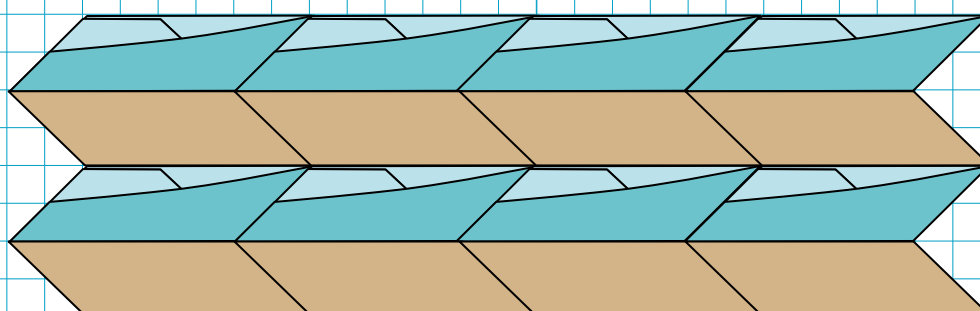
A1-1



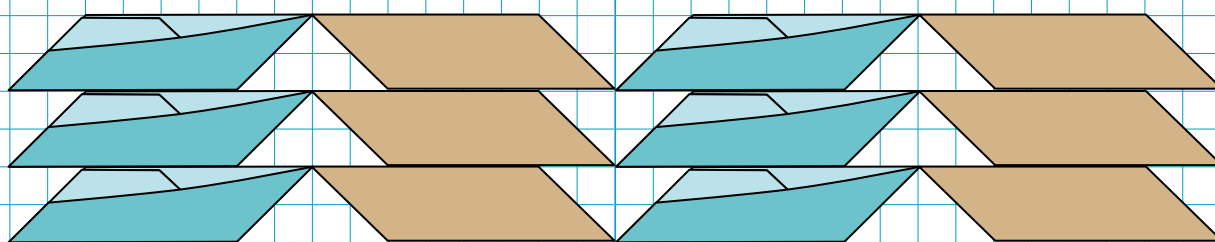
A1-2

B=MODULO BASE + MODULO BASE INVERSO

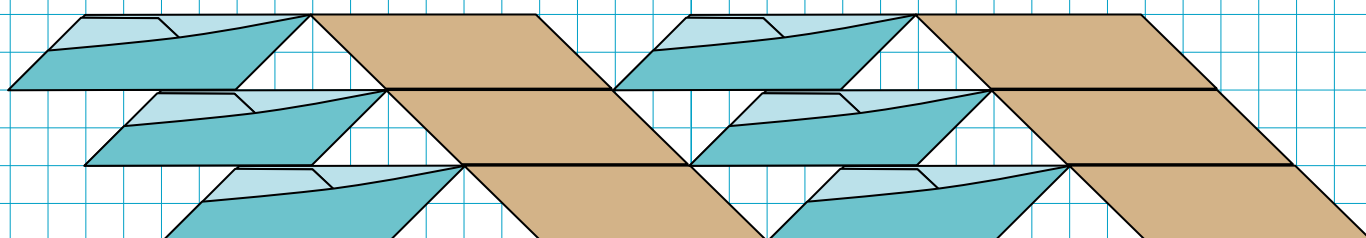
$$\text{[Blue Module]} + \text{[Orange Module]}$$



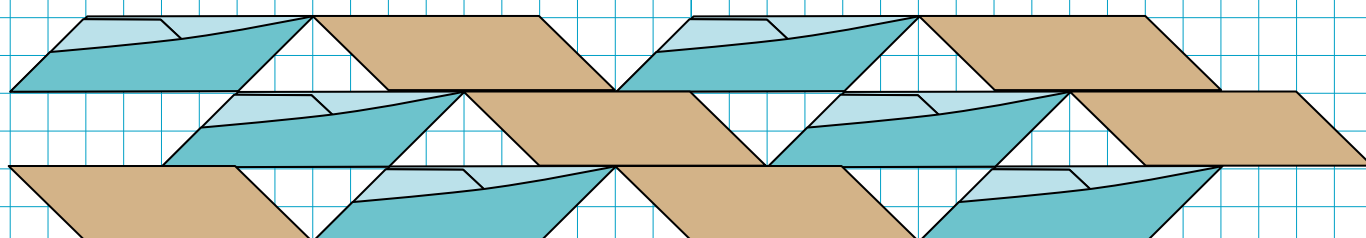
B1-1



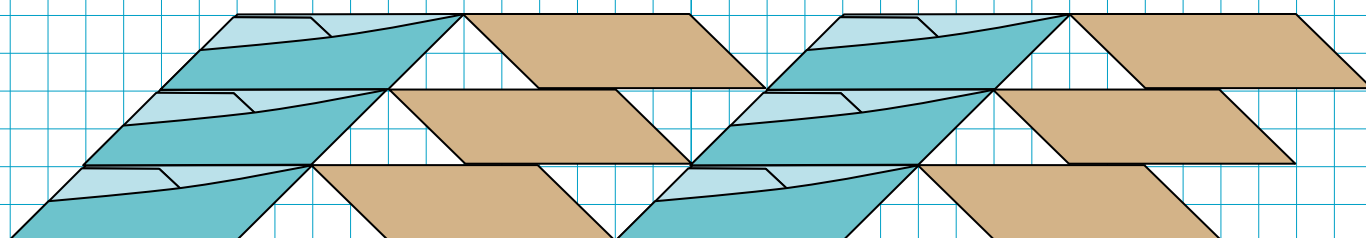
B1-2



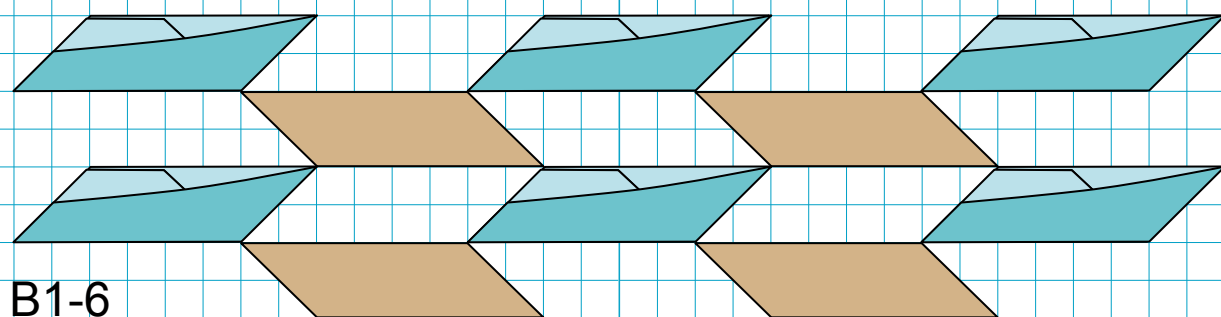
B1-3



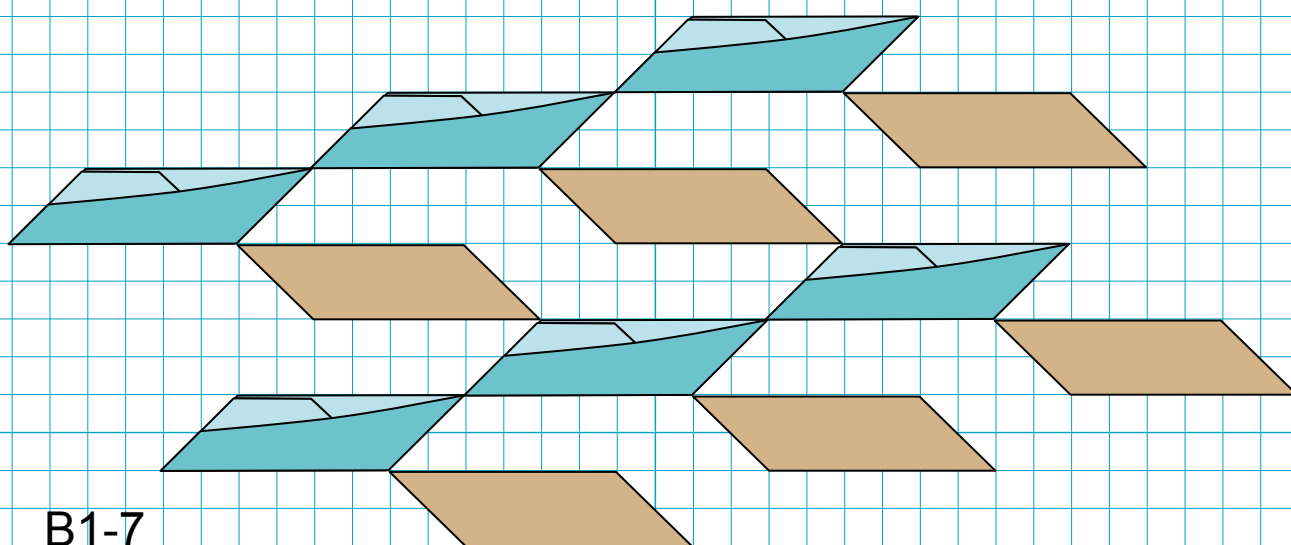
B1-4



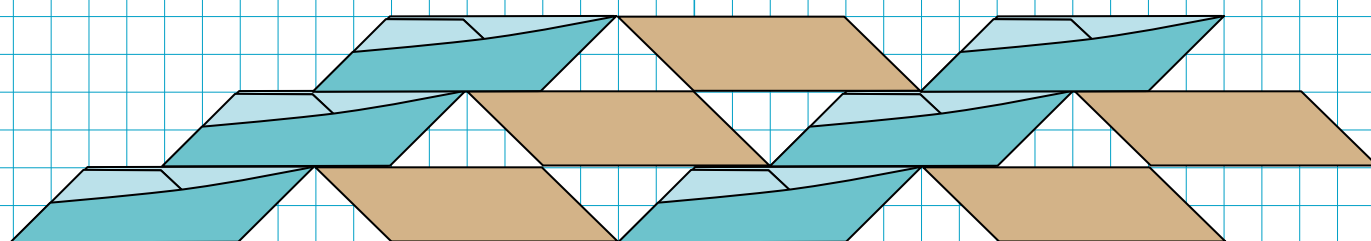
B1-5



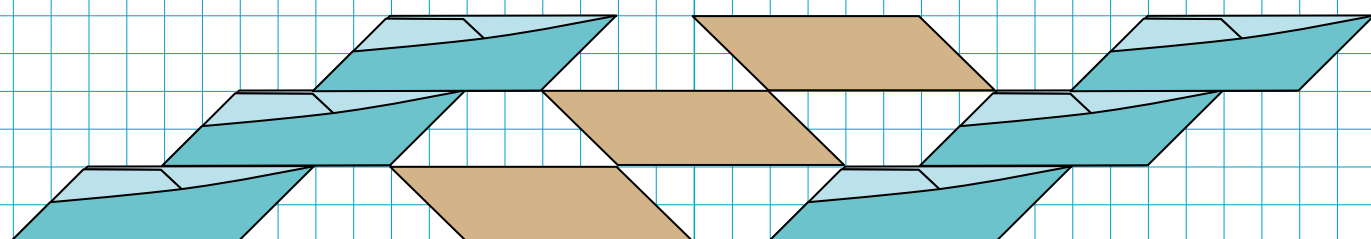
B1-6



B1-7

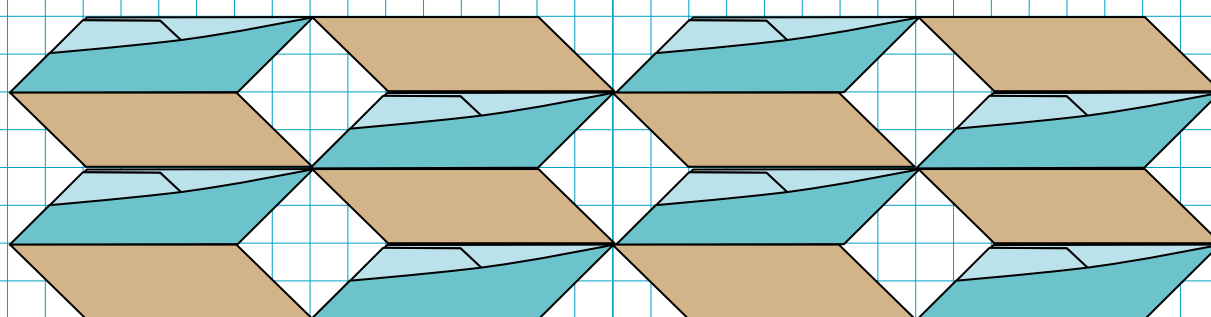
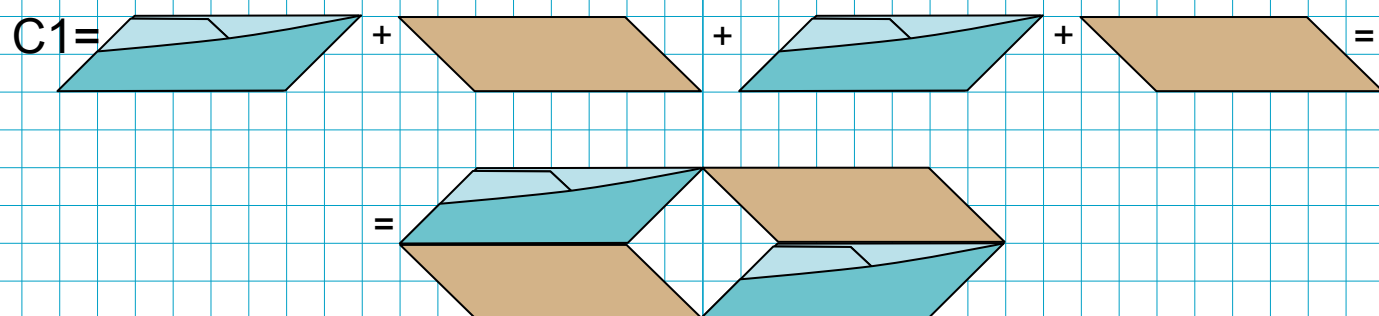


B1-8

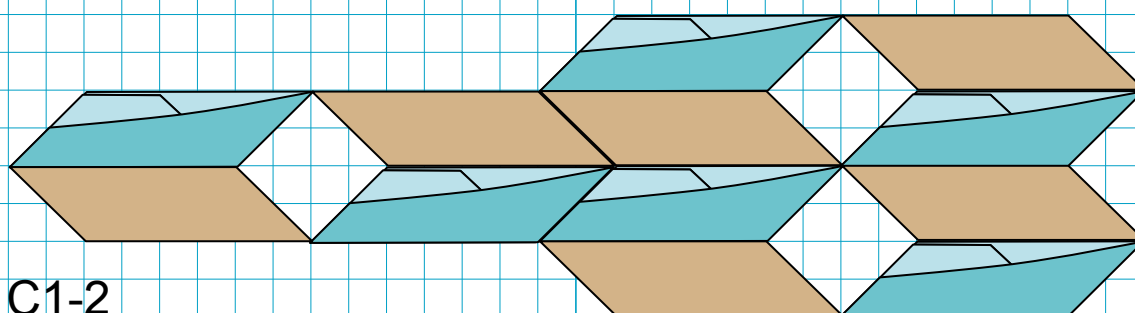


B1-9

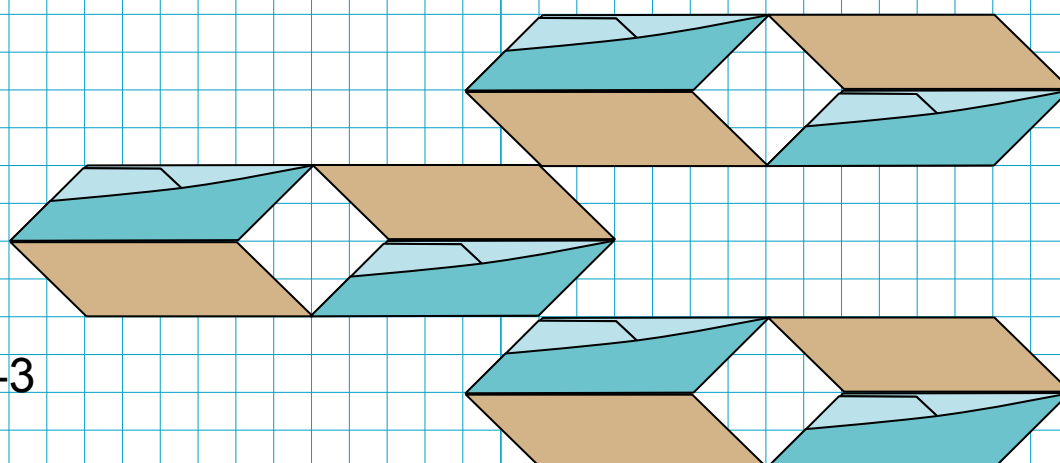
C=MODULO COMPOSTO DA 4 MODULI BASE



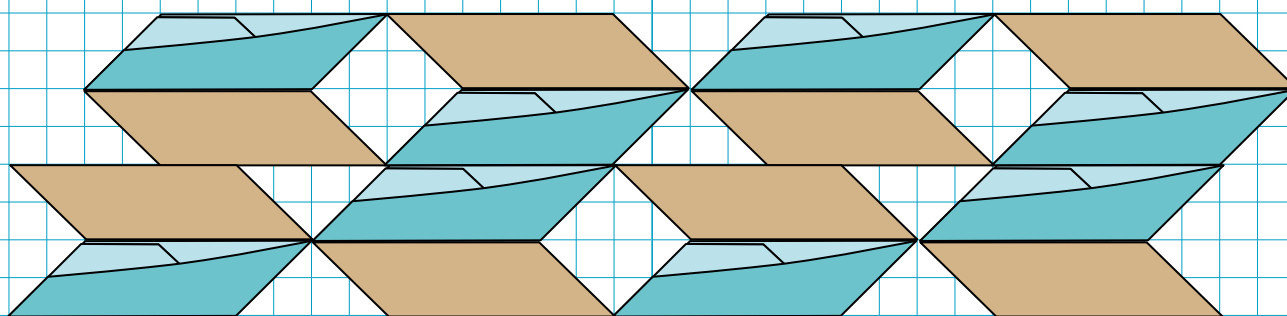
C1-1



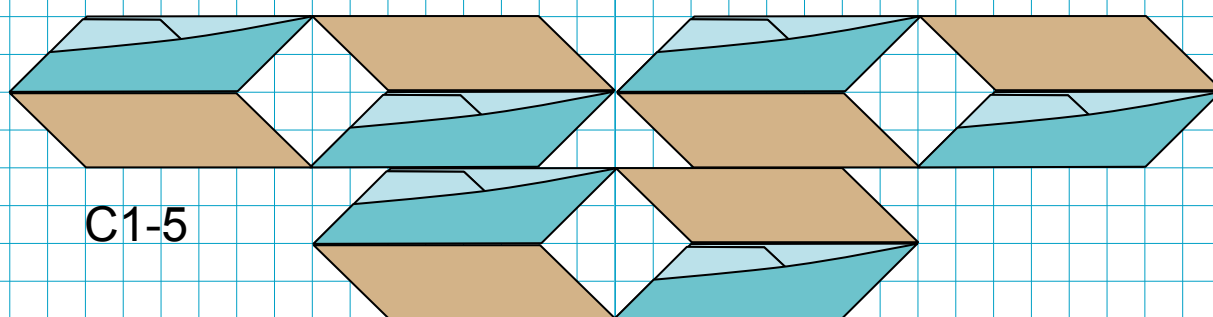
C1-2



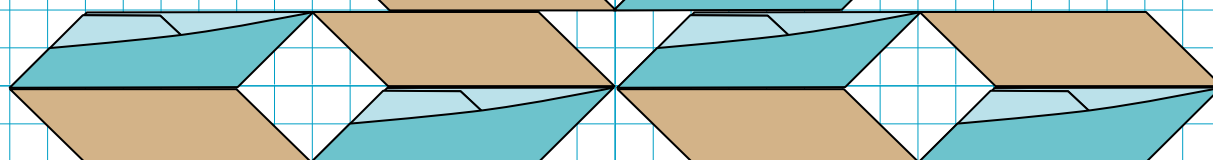
C1-3



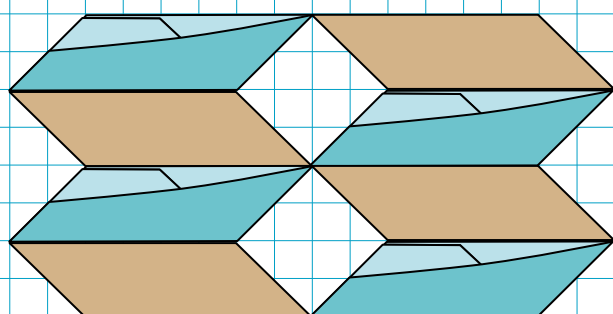
C1-4



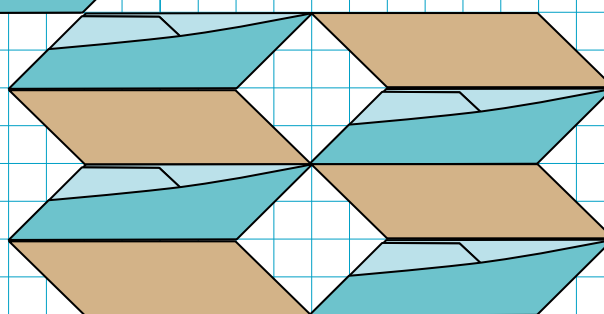
C1-5



C1-6



C1-7

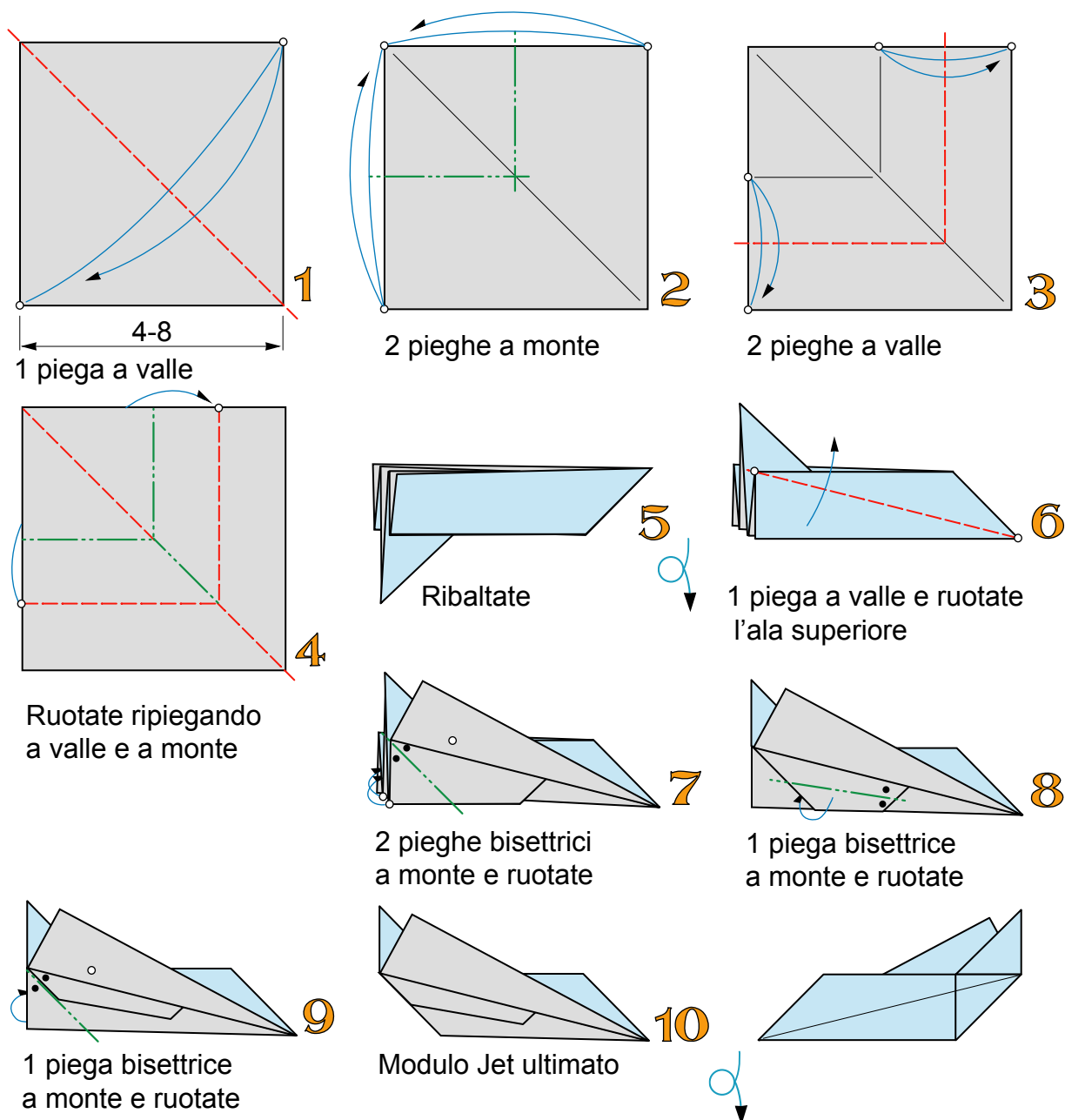


MODULO "JET"

Per questo semplice modulo ho eseguito aggregazioni logiche di tipo A1, B1 e C1 e C2: moduli semplici, ribaltati e composti.

Si potrebbe decidere di eseguire aggregazioni con moduli ruotati, visto che si tratta di aerei..

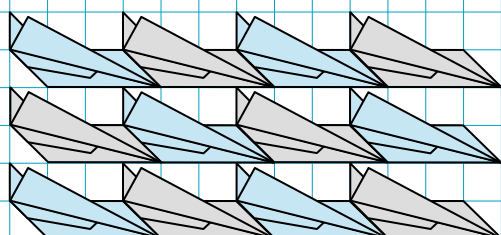
Adoperate fogli quadrati mono o bicolori di 2 colori differenti, di 4 o 8 cm di lato.



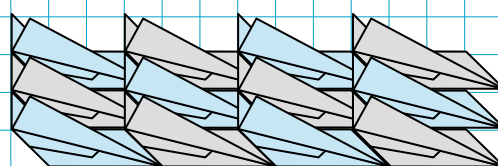
JET - COMPOSIZIONI MODULARI

A= 2 MODULI BASE

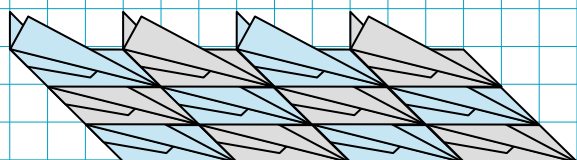
$$A1 = \text{blue module} + \text{grey module}$$



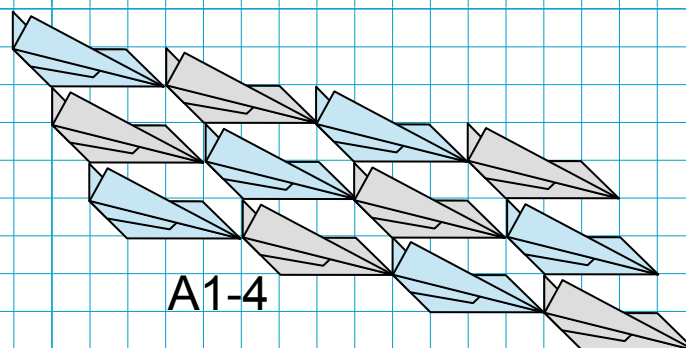
A1-1



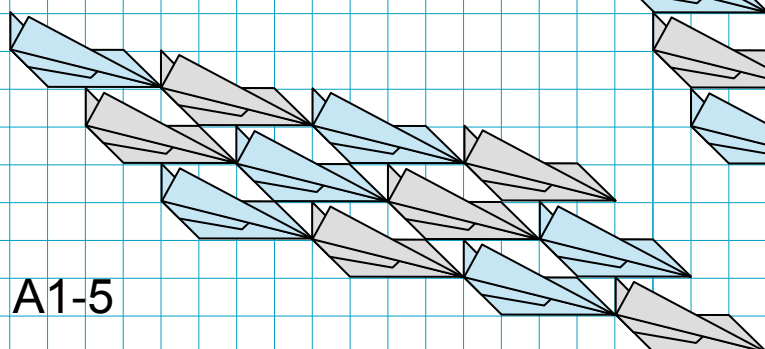
A1-2



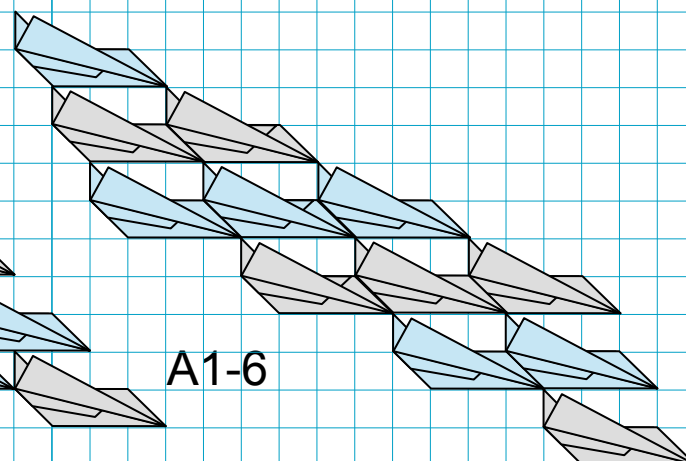
A1-3



A1-4

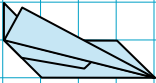
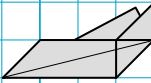


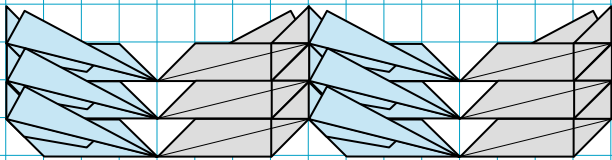
A1-5



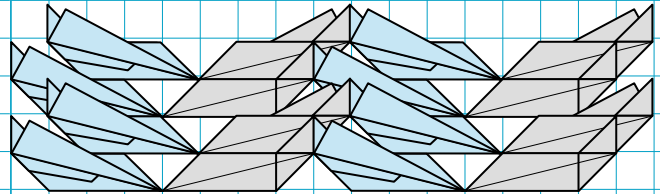
A1-6

B=MODULO BASE + MODULO BASE INVERSO

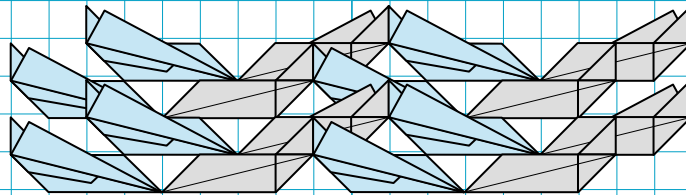
B1=  + 



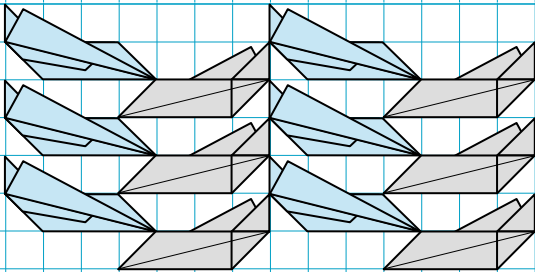
B1-1



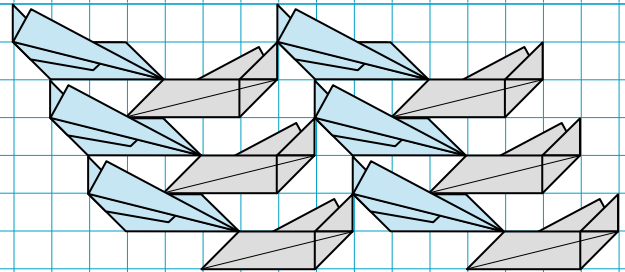
B1-2



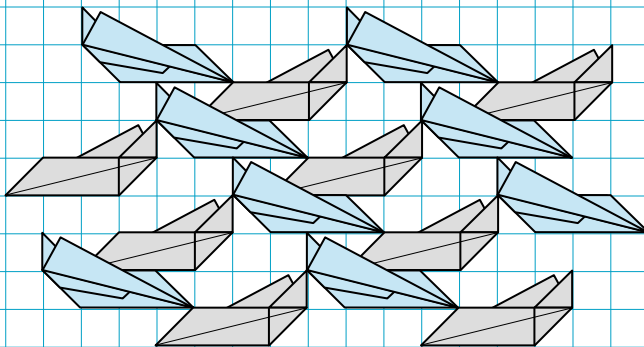
B1-3



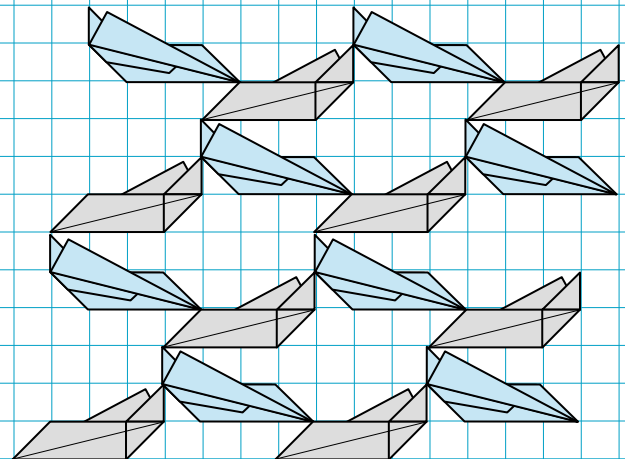
B1-4



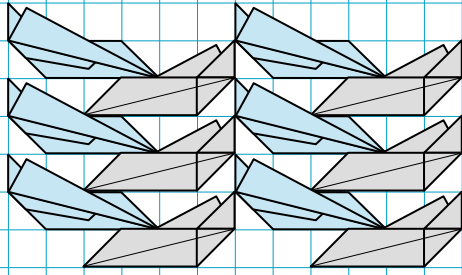
B1-5



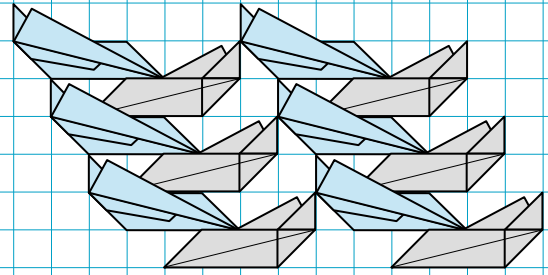
B1-6



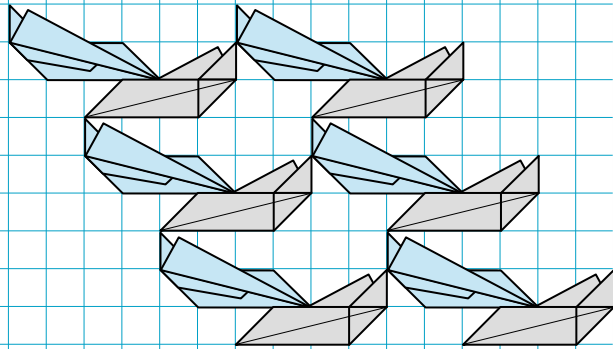
B1-7



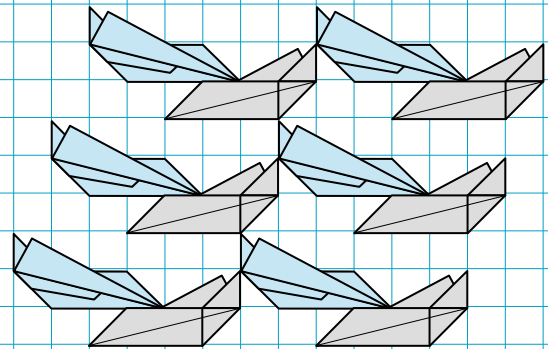
B1-8



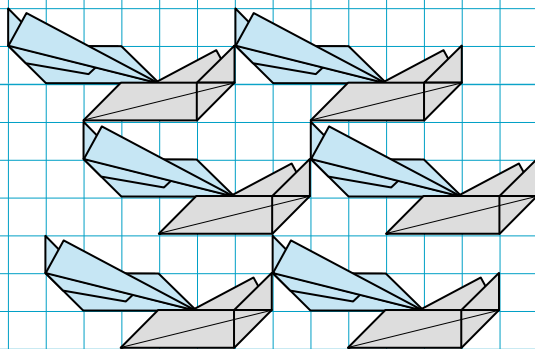
B1-9



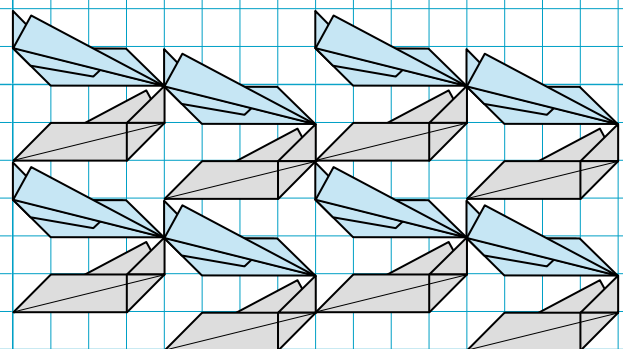
B1-10



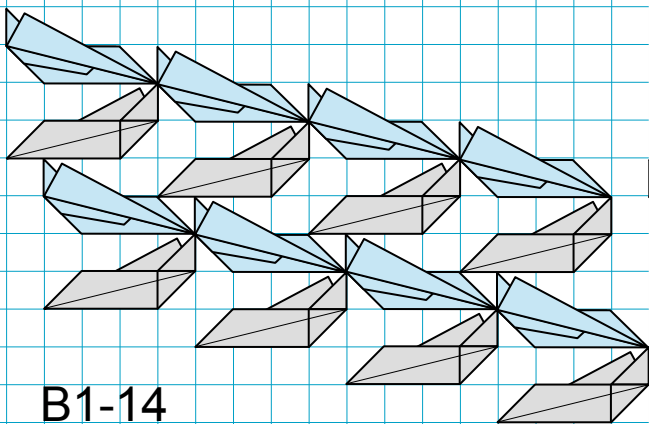
B1-11



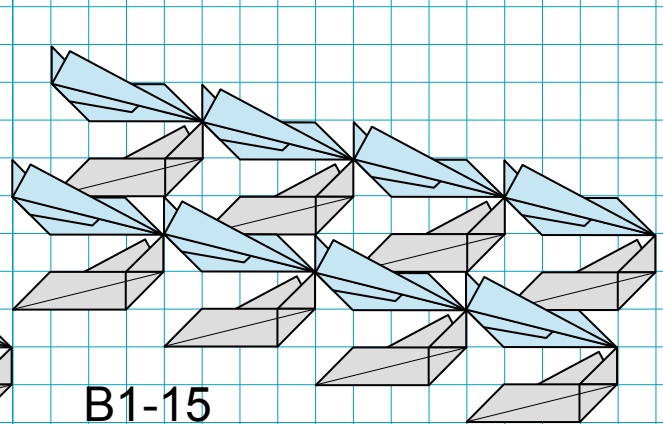
B1-12



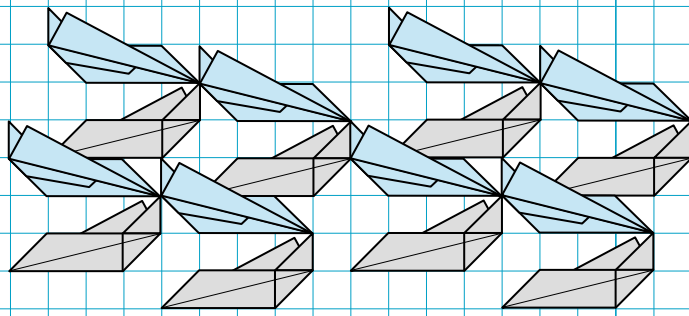
B1-13



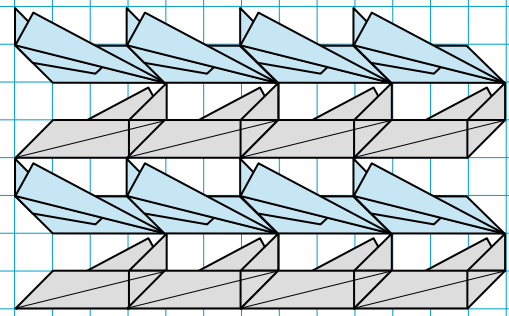
B1-14



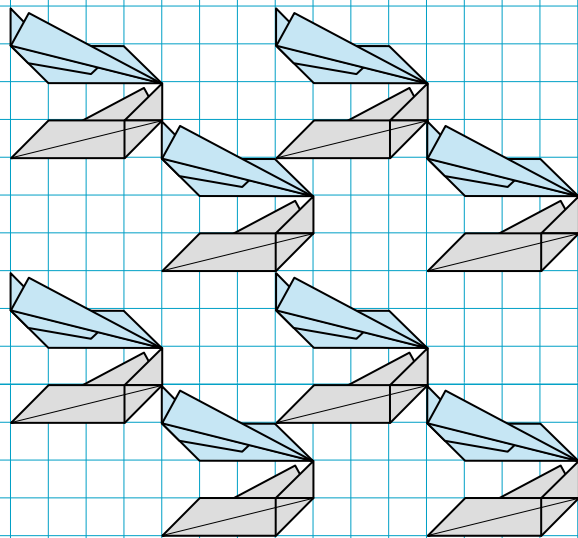
B1-15



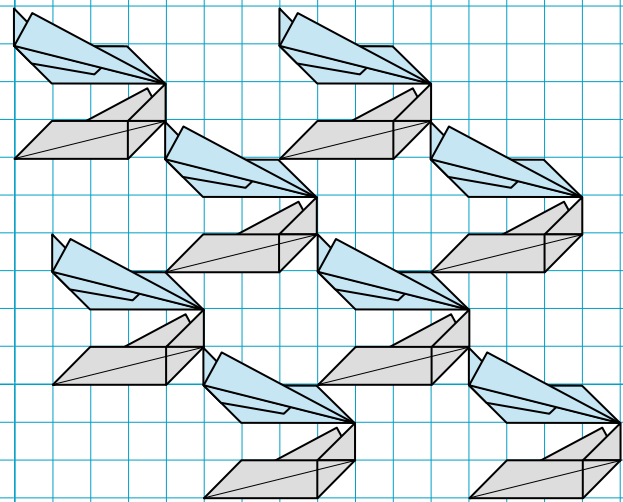
B1-16



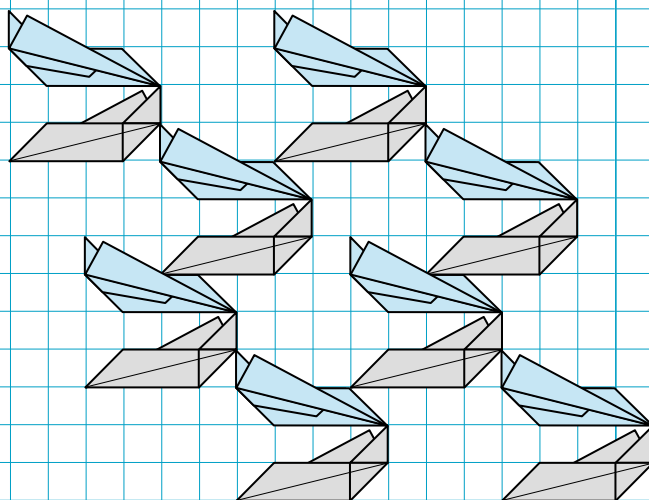
B1-17



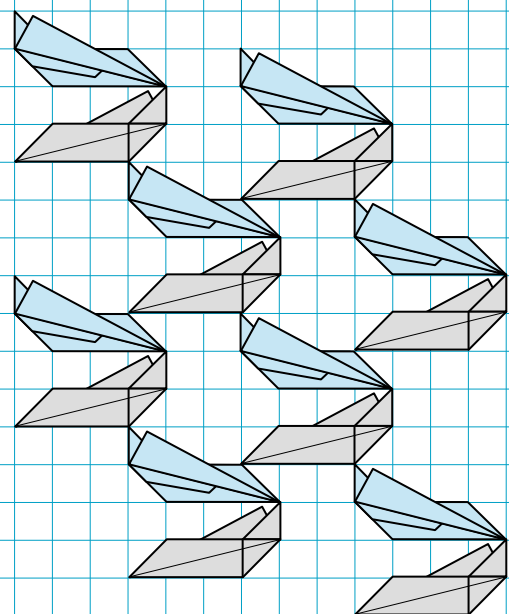
B1-18



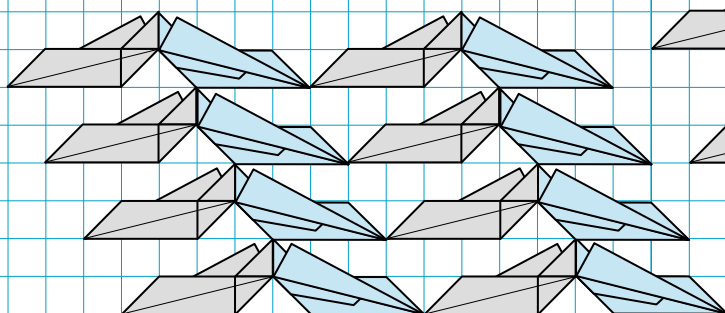
B1-19



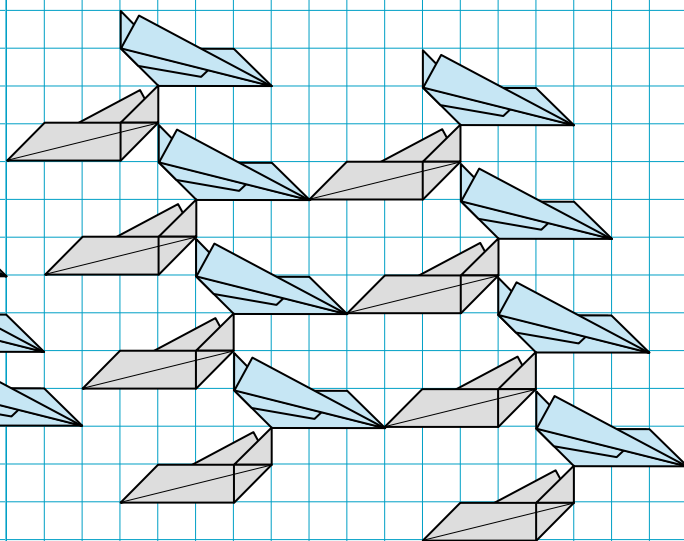
B1-20



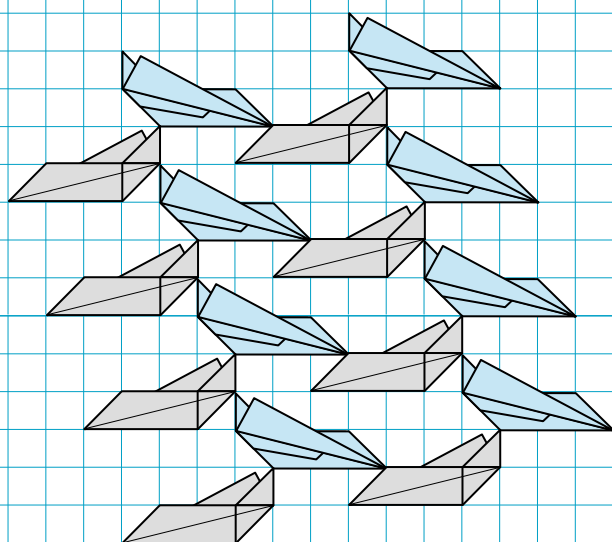
B1-21



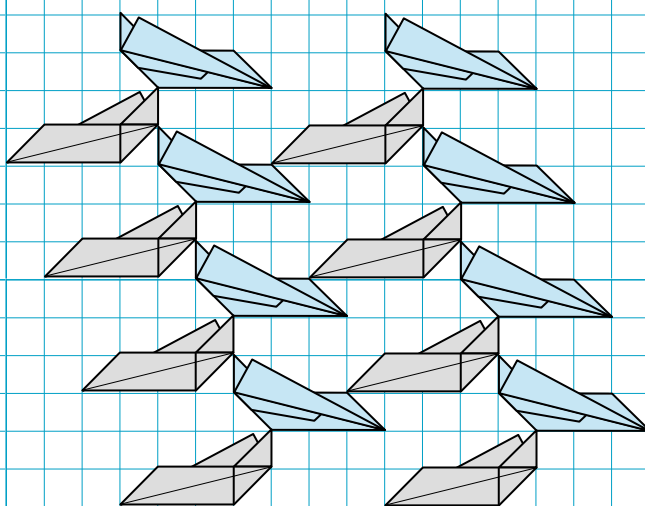
B1-22



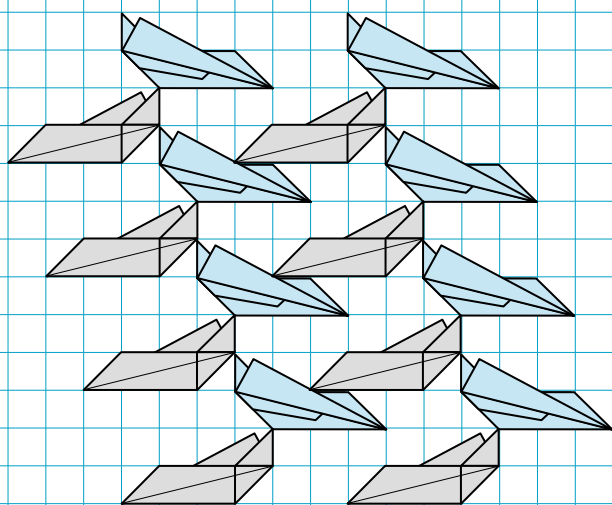
B1-23



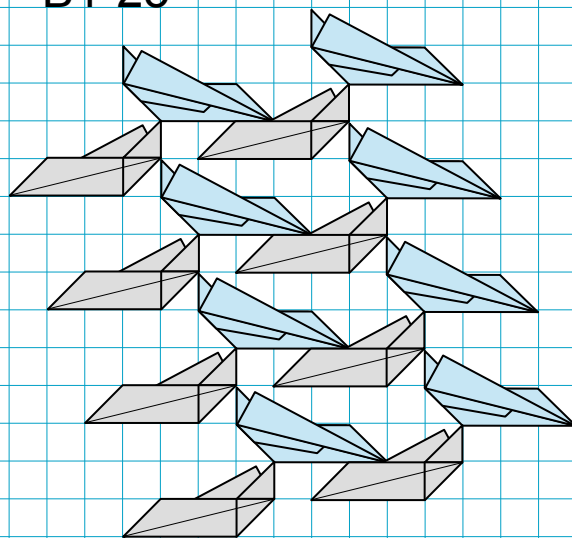
B1-24



B1-25



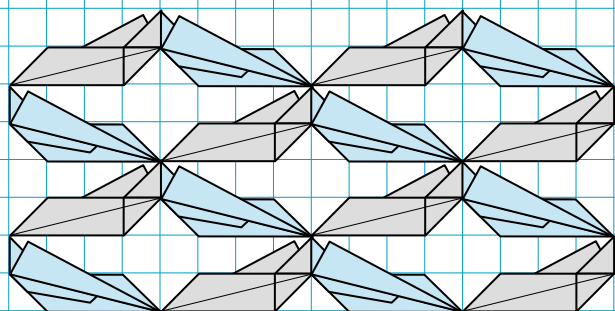
B1-26



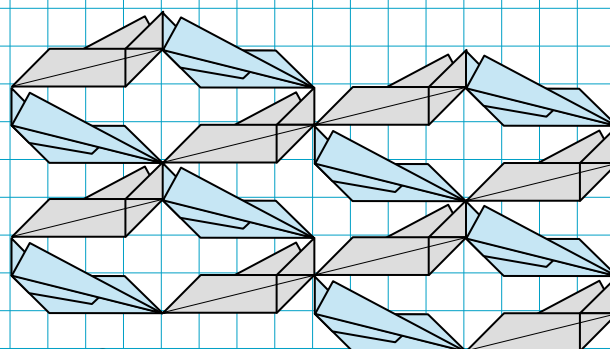
B1-27

C=MODULO COMPOSTO DA 4 MODULI BASE

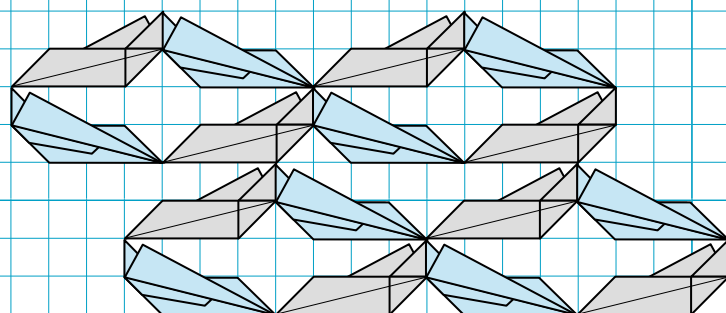
$$C1 = \text{[Module 1]} + \text{[Module 2]} + \text{[Module 1]} + \text{[Module 2]} = \text{[Composite Module C1]}$$



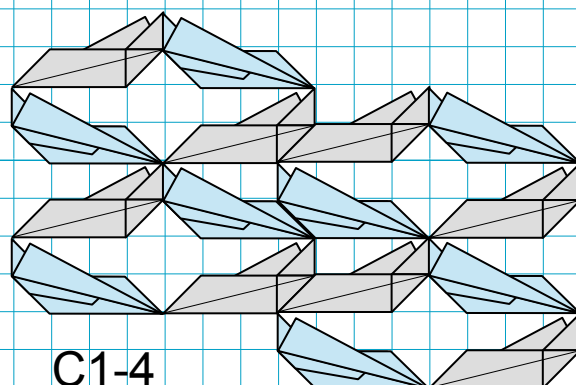
C1-1



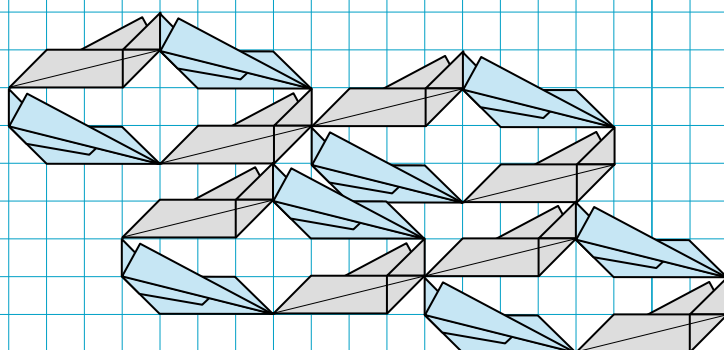
C1-2



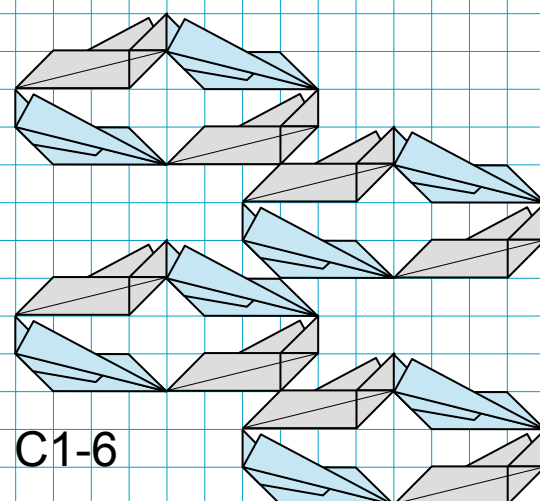
C1-3



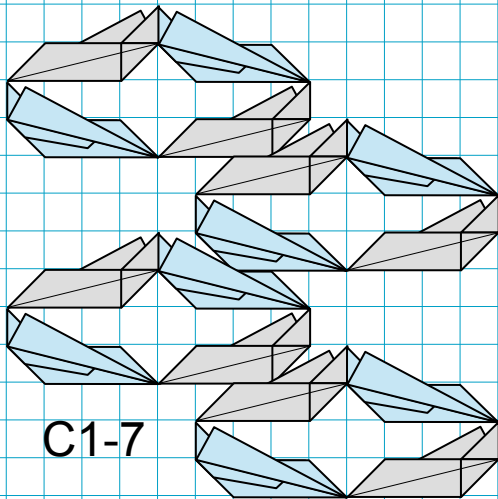
C1-4



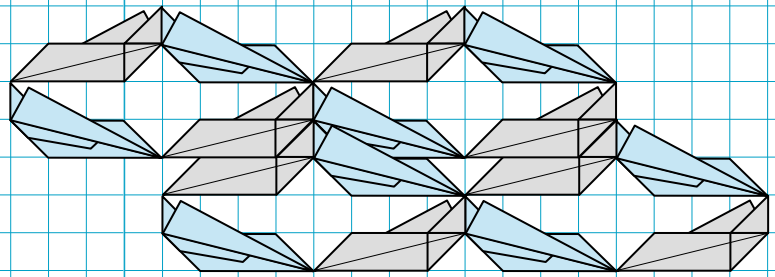
C1-5



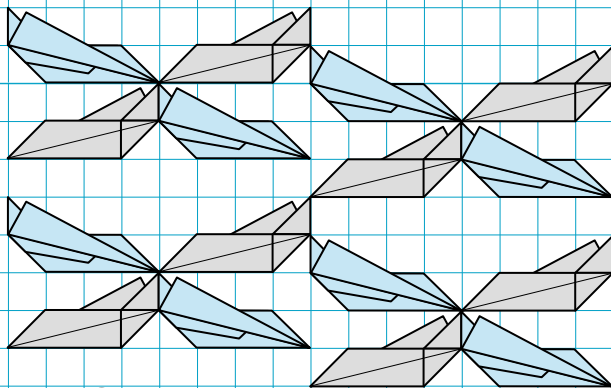
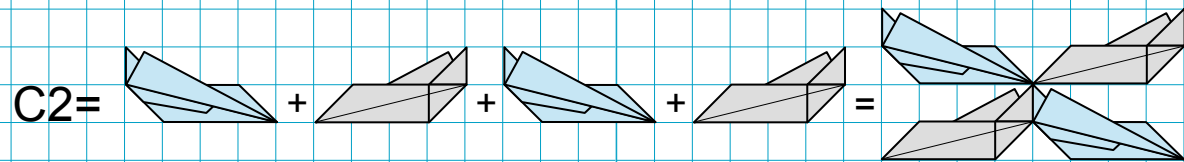
C1-6



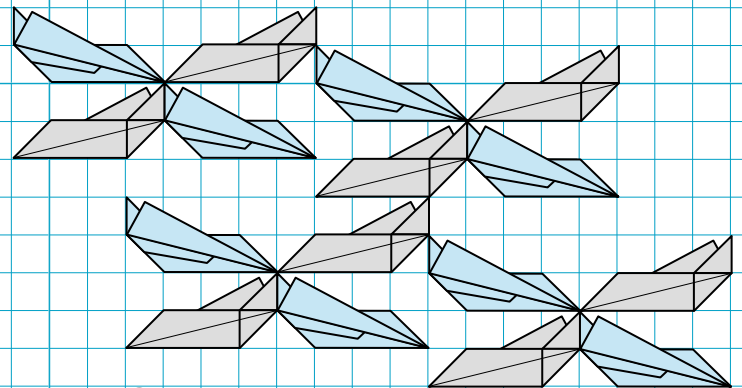
C1-7



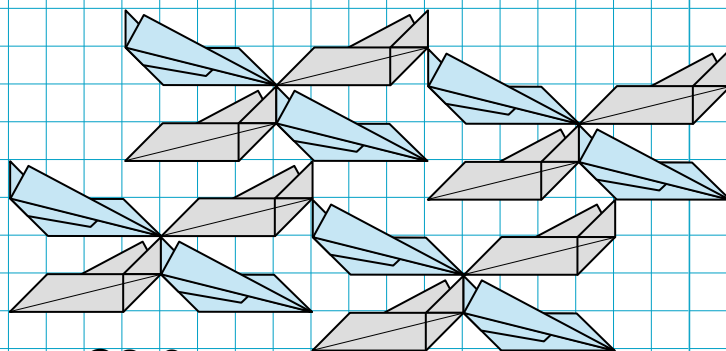
C1-8



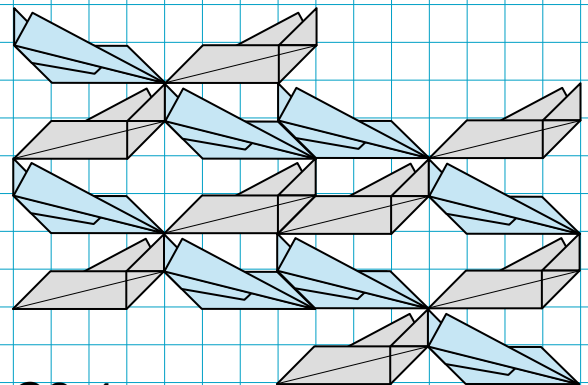
C2-1



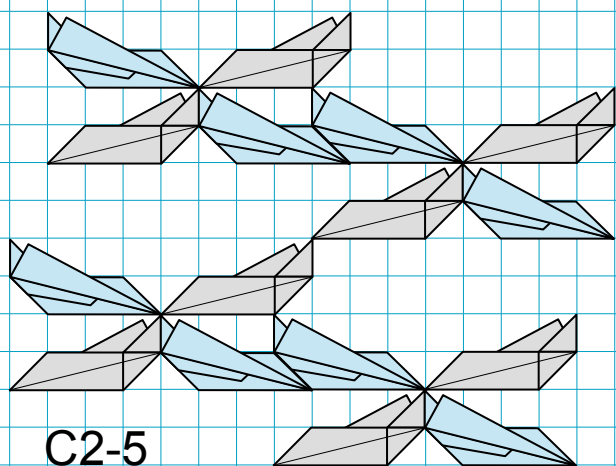
C2-2



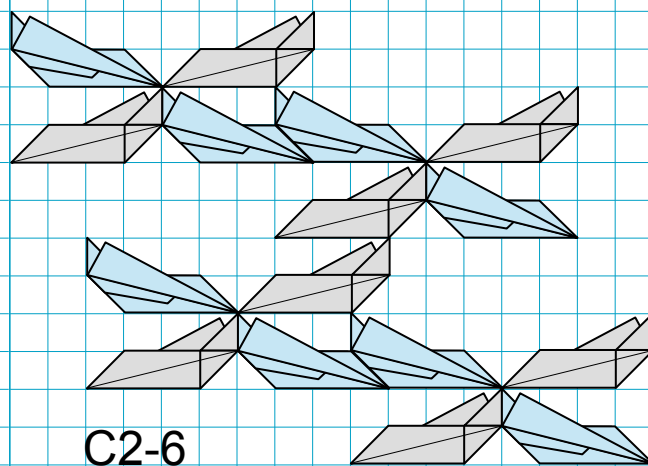
C2-3



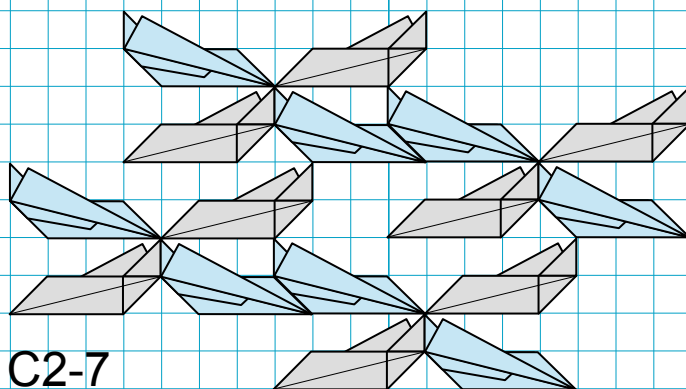
C2-4



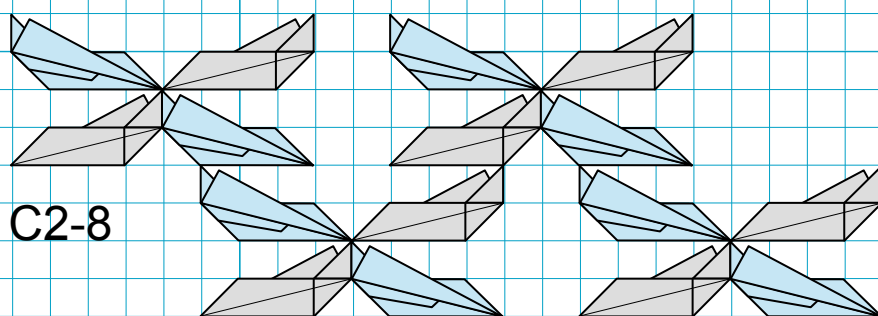
C2-5



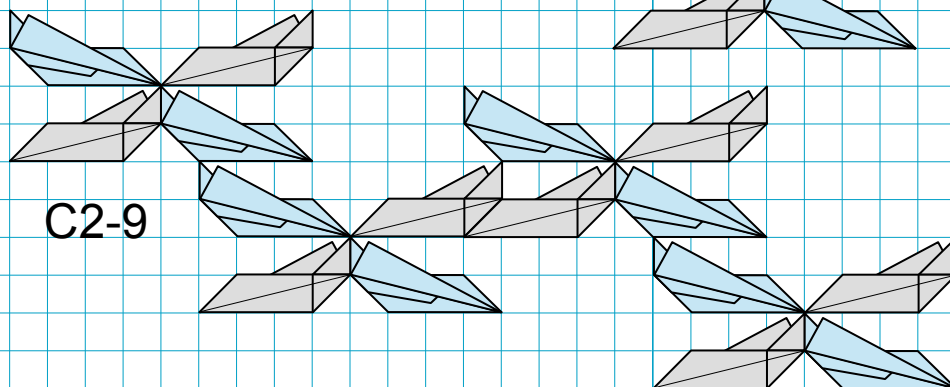
C2-6



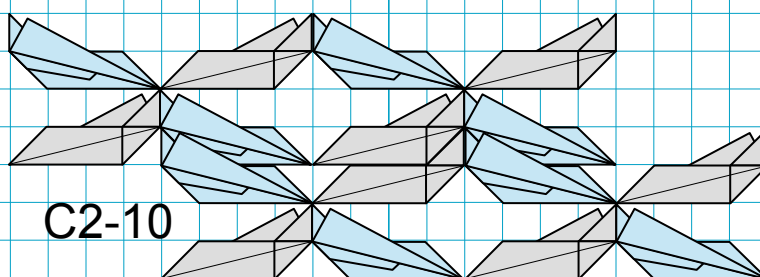
C2-7



C2-8



C2-9



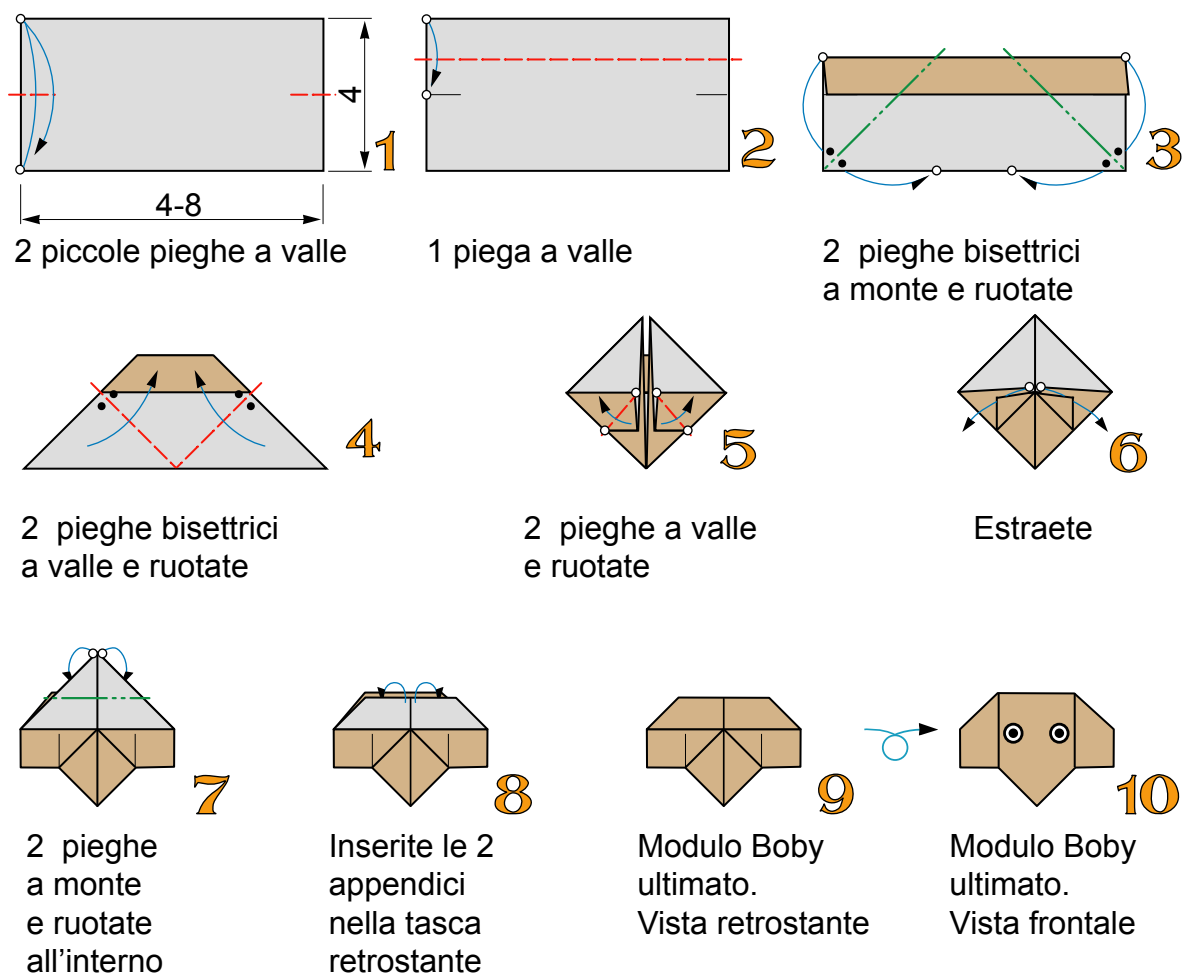
C2-10

MODULO "BOBY"

Per questo semplice modulo ho eseguito aggregazioni di tipo A1 e C1, moduli semplici e composti.

Si potrebbe decidere di eseguire anche aggregazioni con moduli ruotati A1, A2, A3.

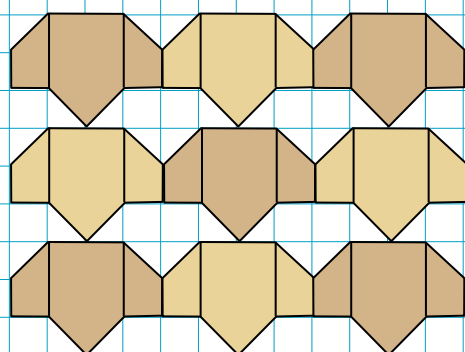
Adoperate fogli rettangolari 2x1 mono o bicolori di 2 colori differenti, di 4 o 8 cm di lato.



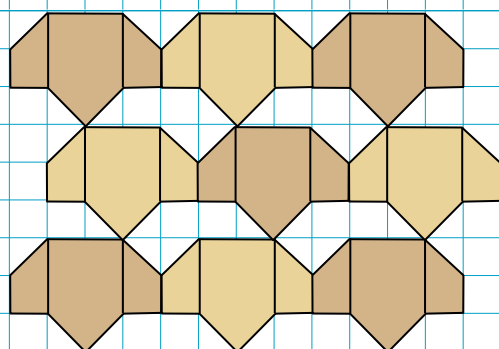
BOBY - COMPOSIZIONI MODULARI

A= 2 MODULI BASE

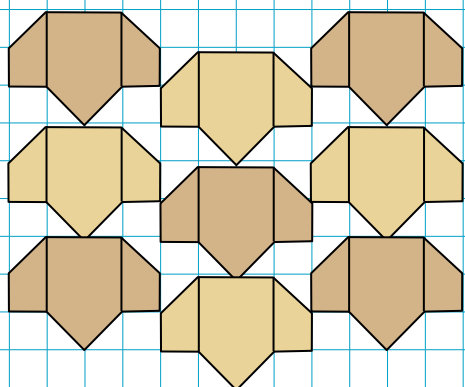
$$A1 = \text{[Brown Module]} + \text{[Yellow Module]}$$



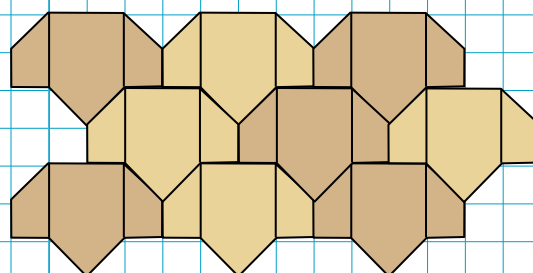
A1-1



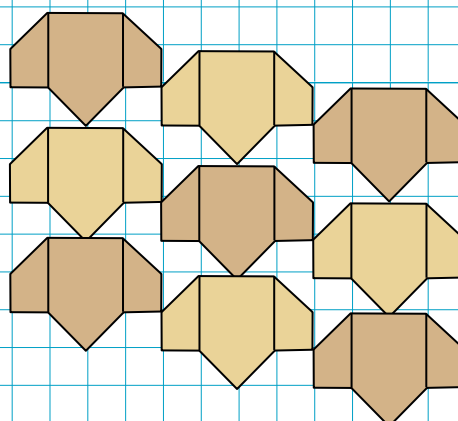
A1-3



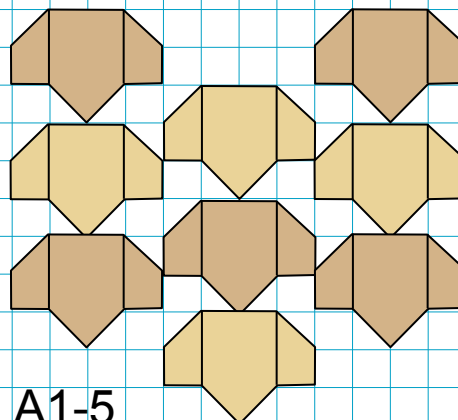
A1-4



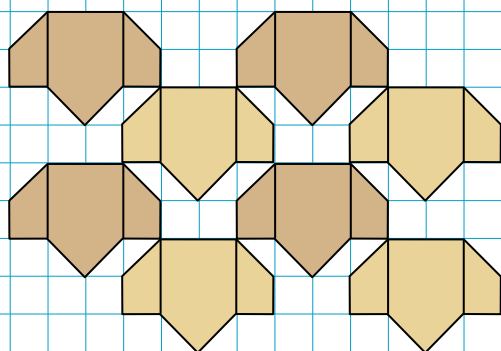
A1-2



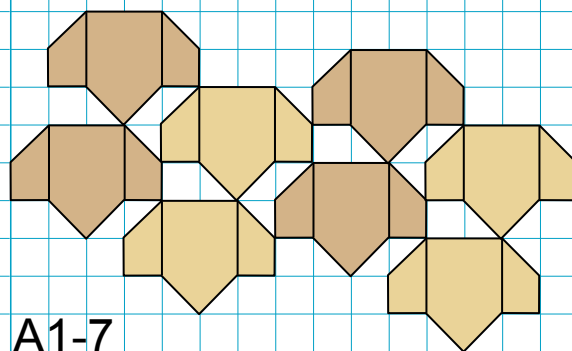
A1-4



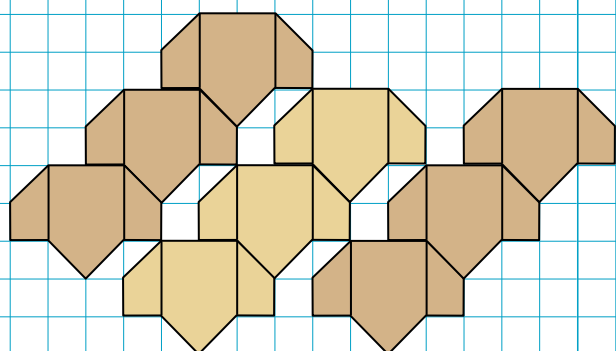
A1-5



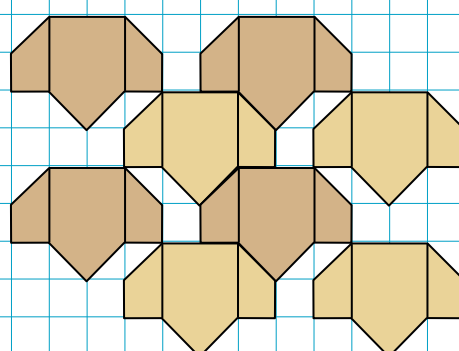
A1-6



A1-7

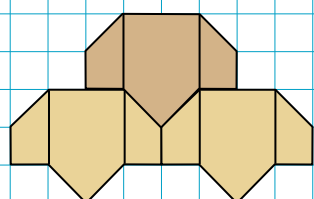


A1-8

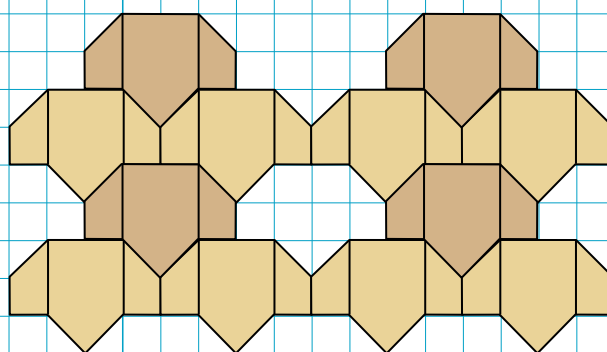


A1-9

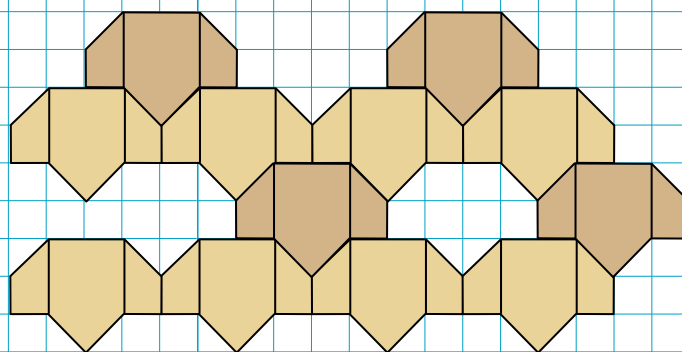
C=MODULO COMPOSTO DA 3 MODULI BASE



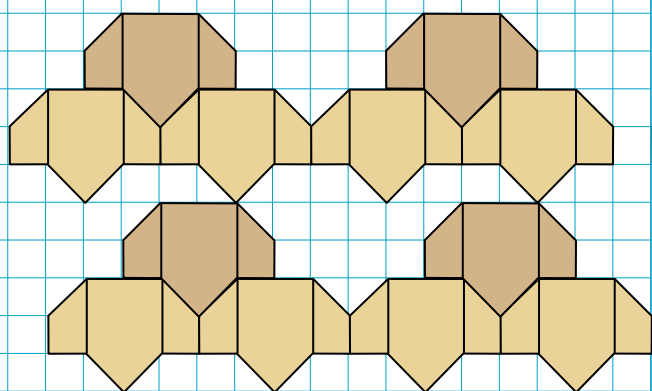
C1



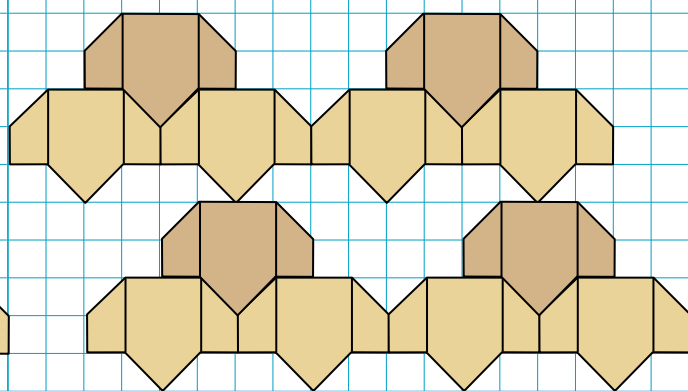
C1-1



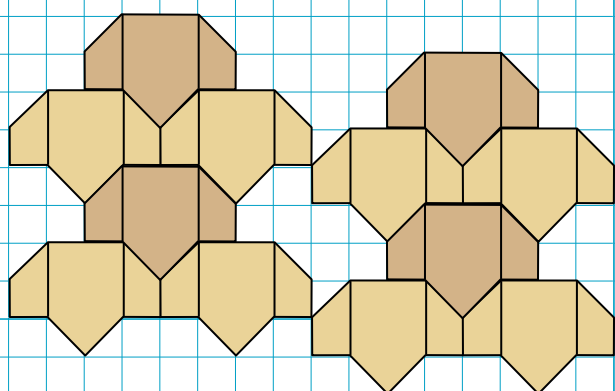
C1-2



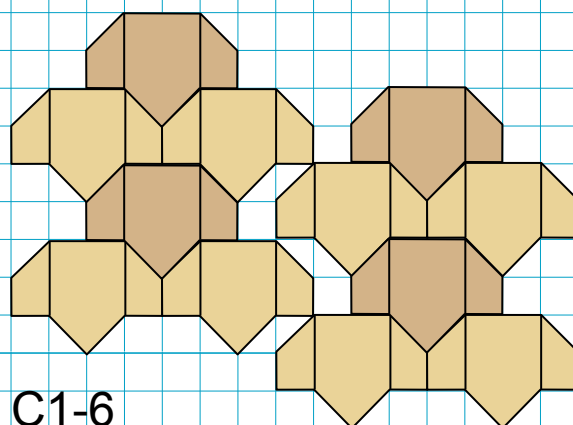
C1-3



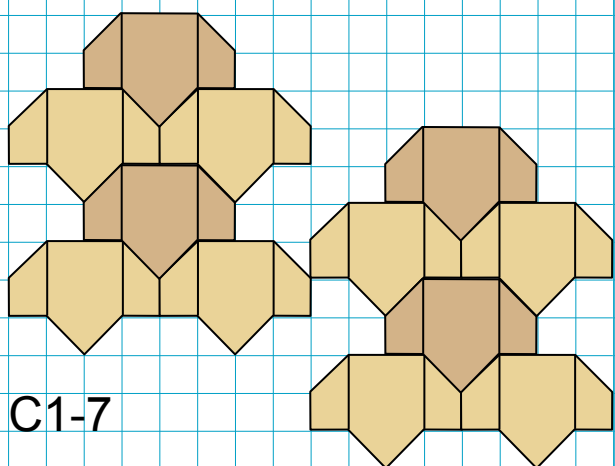
C1-4



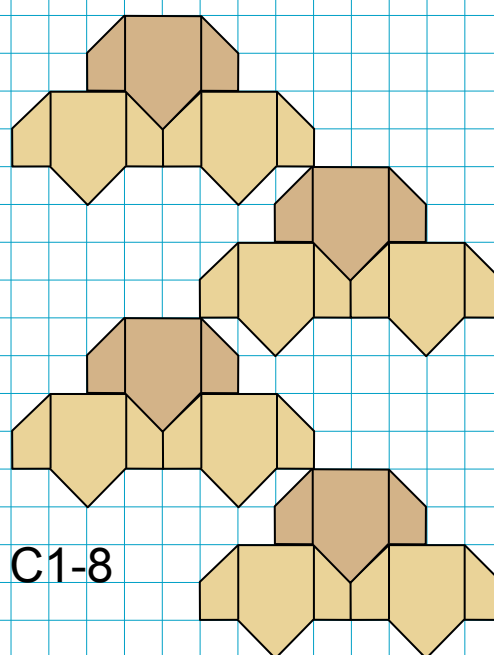
C1-5



C1-6



C1-7



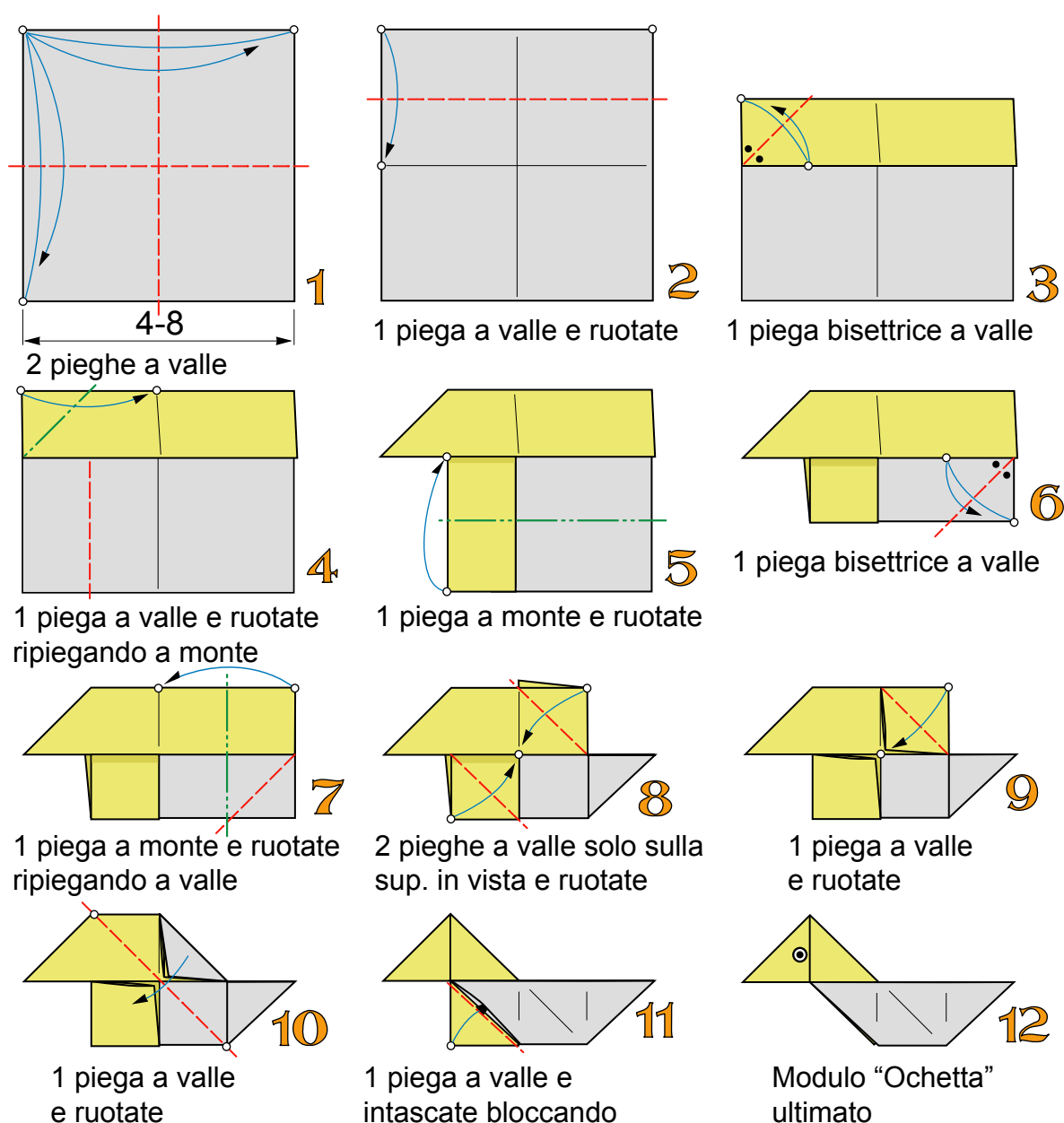
C1-8

MODULO "OCHETTA"

Per questo semplice modulo ho eseguito aggregazioni di tipo A1, B1, C1 e C2: moduli semplici, ribaltati e composti.

Non considero educativo formare aggregazioni con moduli ruotati.

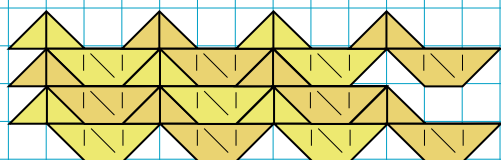
Adoperate fogli quadrati mono o bicolori di 2 colori differenti, di 4 o 8 cm di lato.



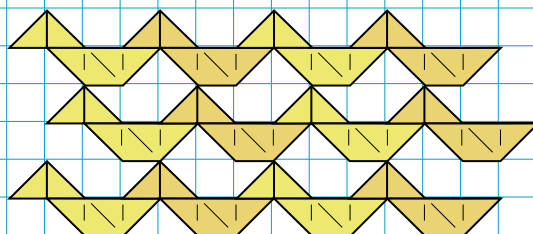
OCHETTA - COMPOSIZIONI MODULARI

A=2 MODULI BASE

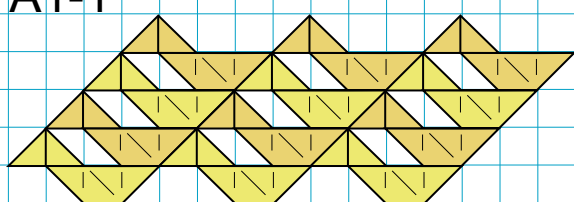
$$A1 = \text{triangle} + \text{triangle}$$



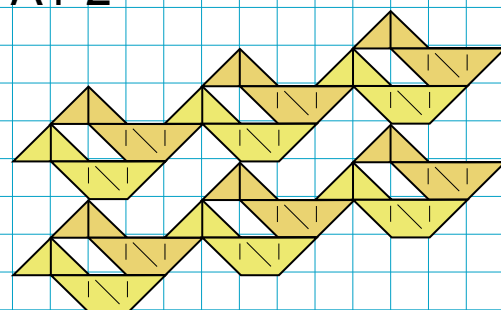
A1-1



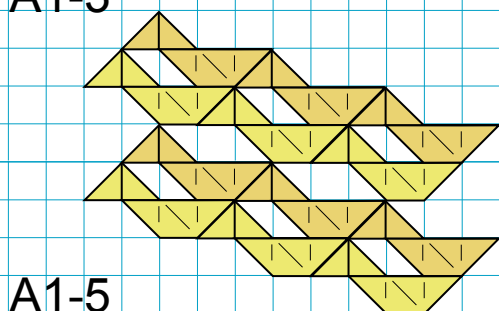
A1-2



A1-3



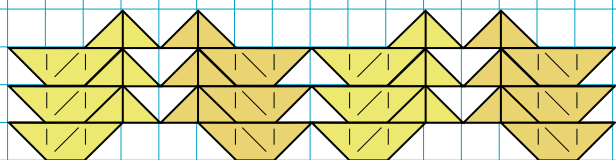
A1-4



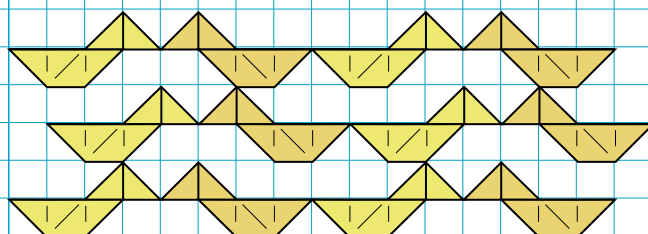
A1-5

B=MODULO BASE + MODULO BASE INVERSO

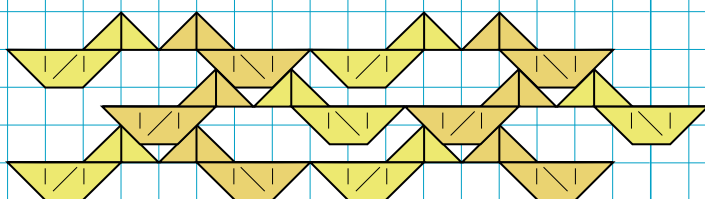
$$B1 = \text{triangle} + \text{triangle}$$



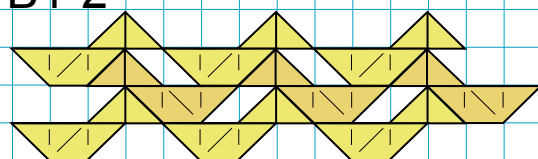
B1-1



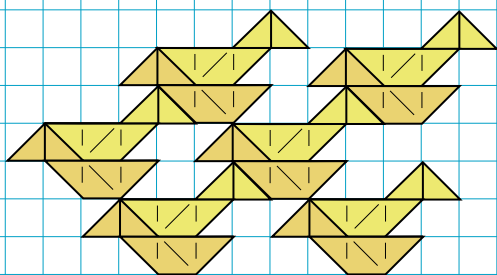
B1-2



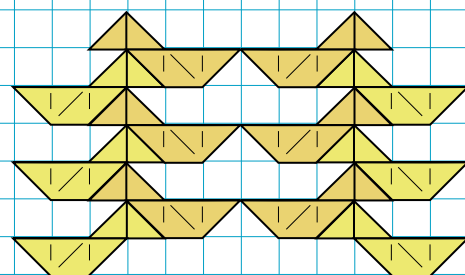
B1-3



B1-4

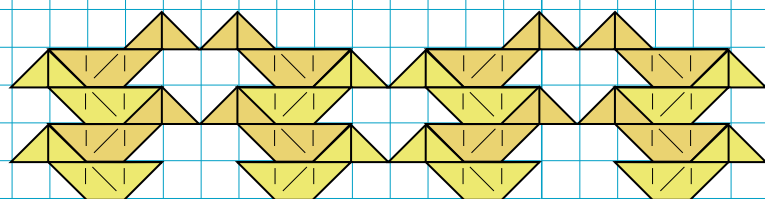
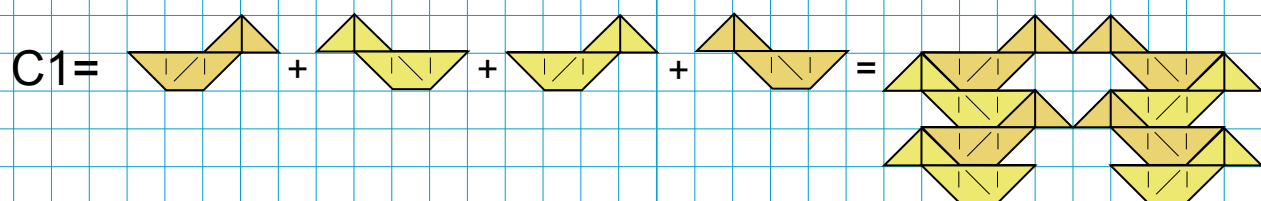


B1-5

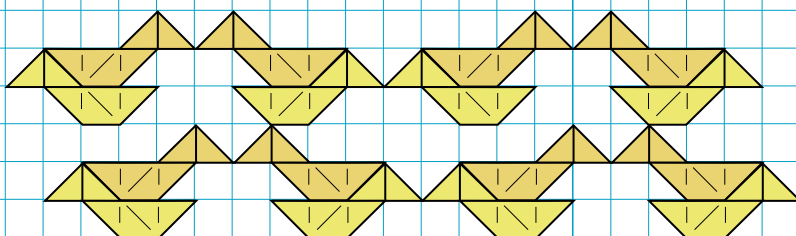


B1-6

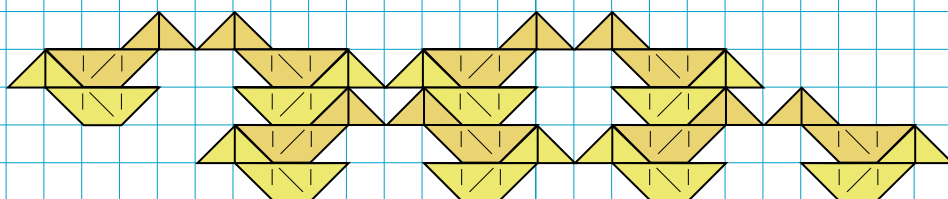
C=MODULO COMPOSTO DA 4 MODULI BASE



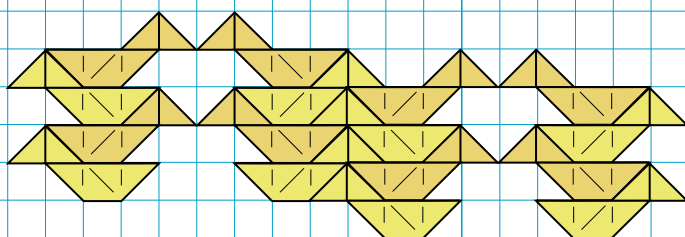
C1-1



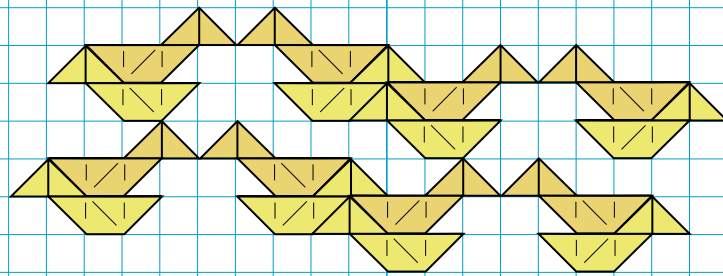
C1-2



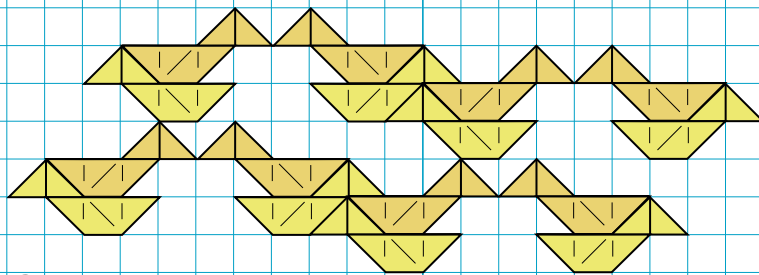
C1-3



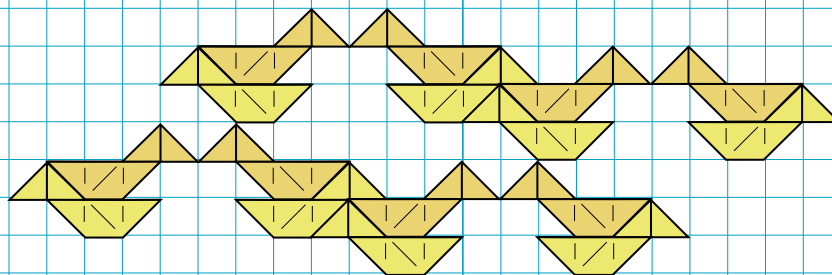
C1-4



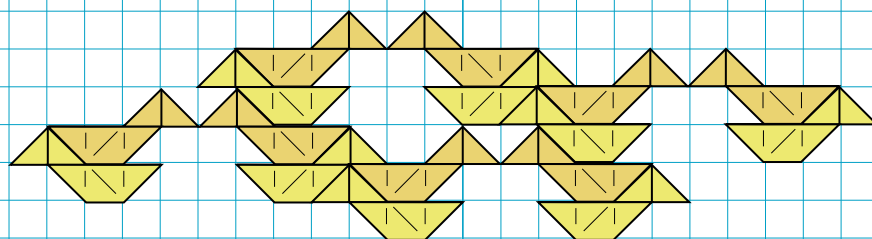
C1-5



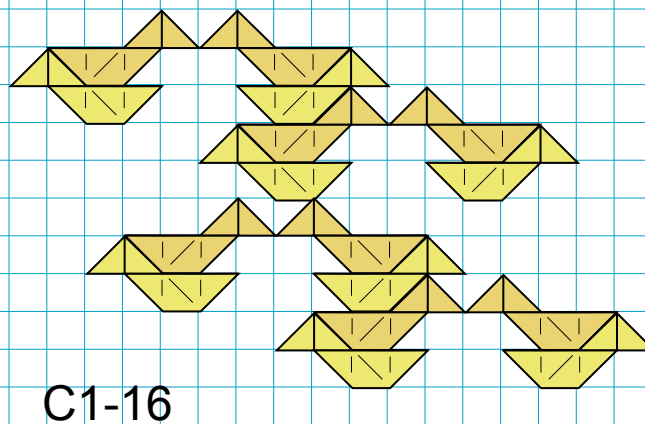
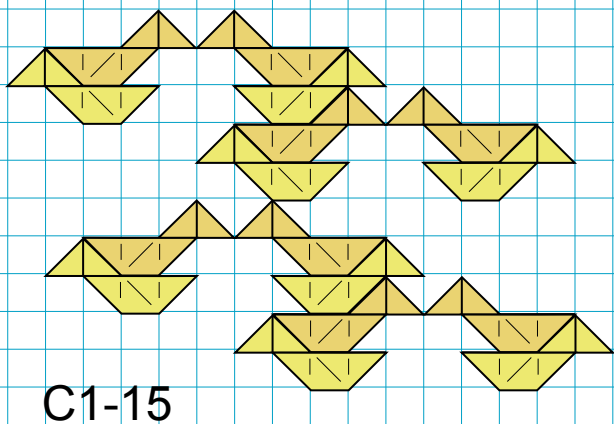
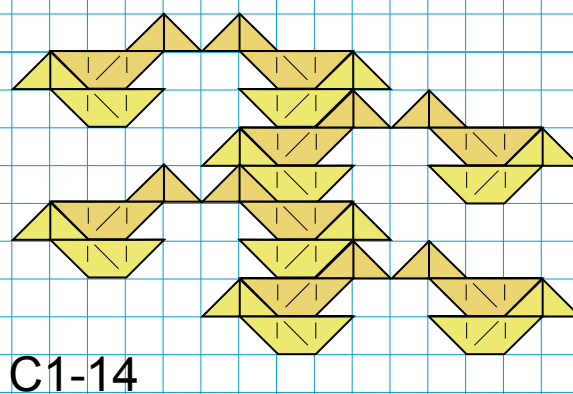
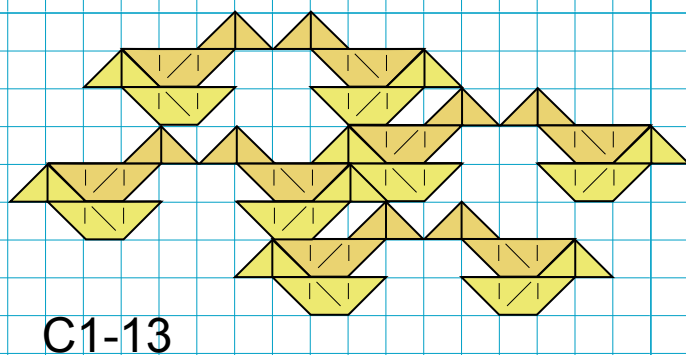
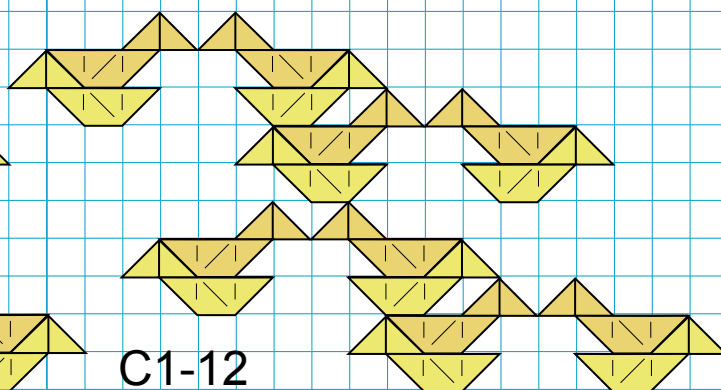
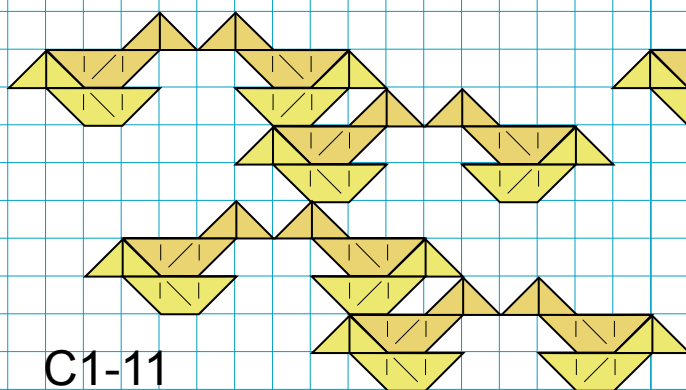
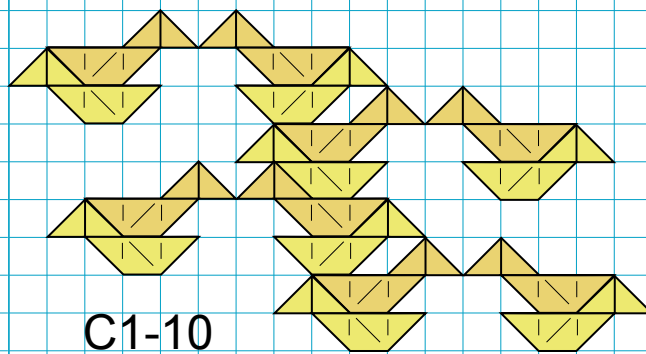
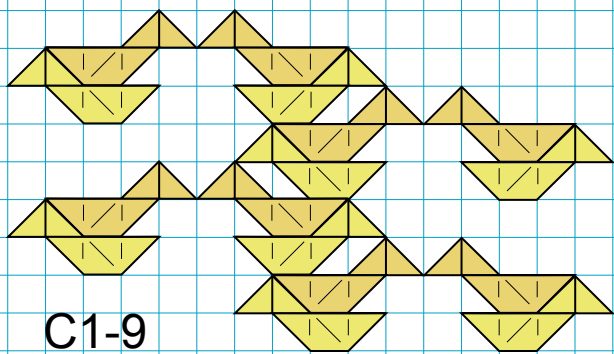
C1-6



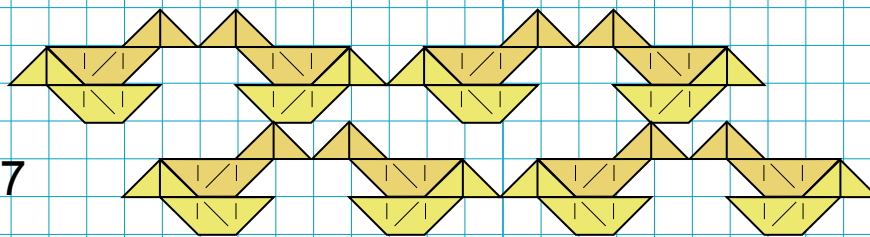
C1-7



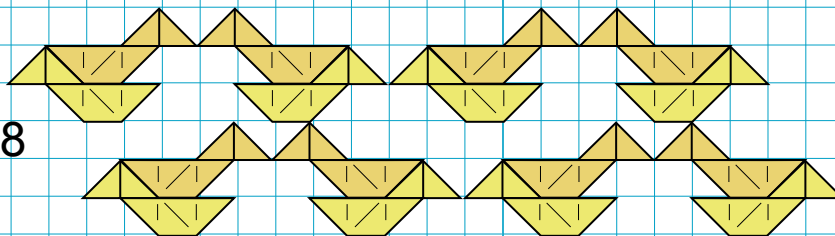
C1-8



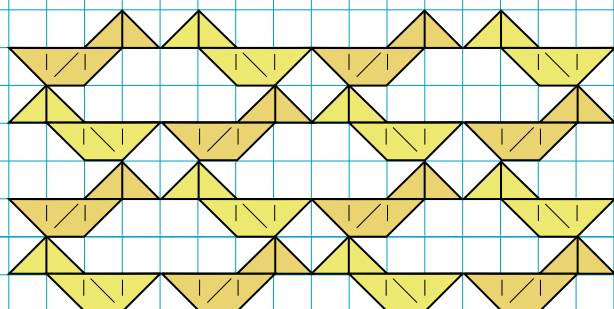
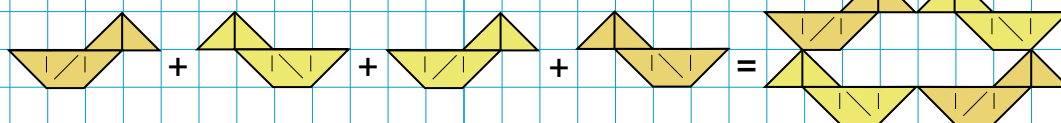
C1-17



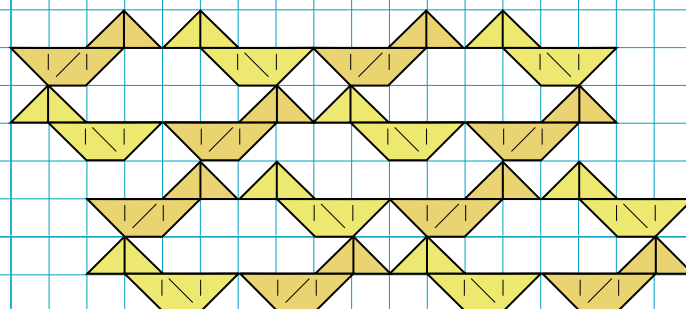
C1-18



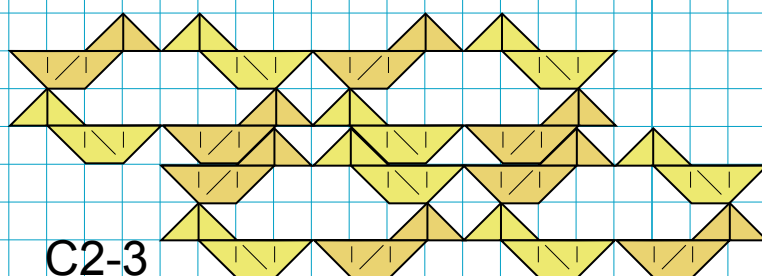
C2=



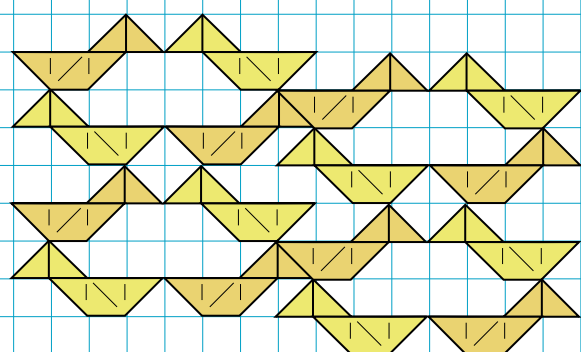
C2-1



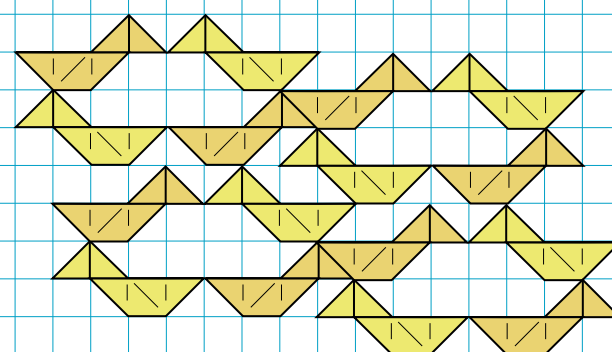
C2-2



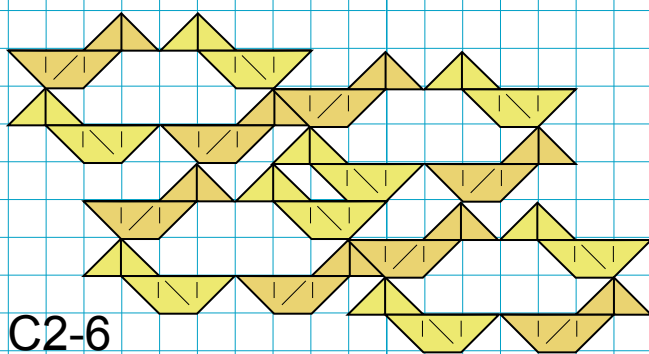
C2-3



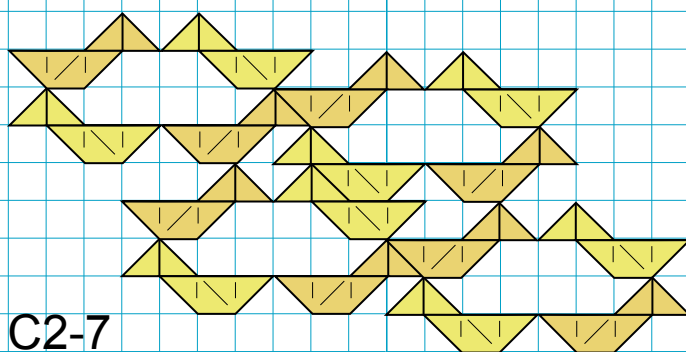
C2-4



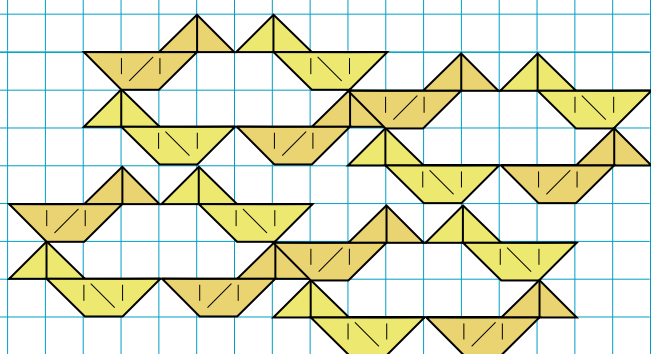
C2-5



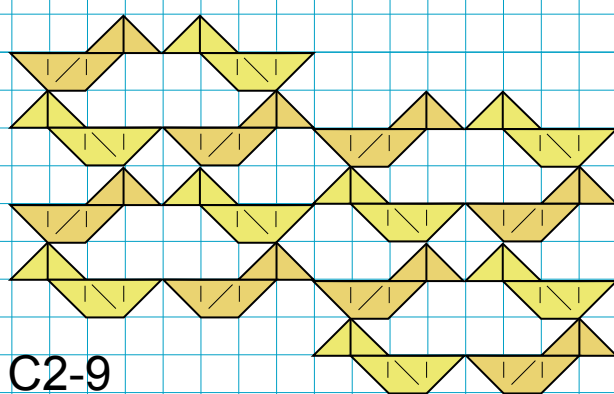
C2-6



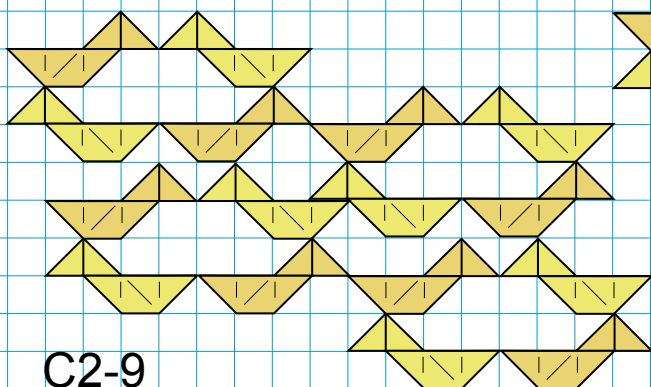
C2-7



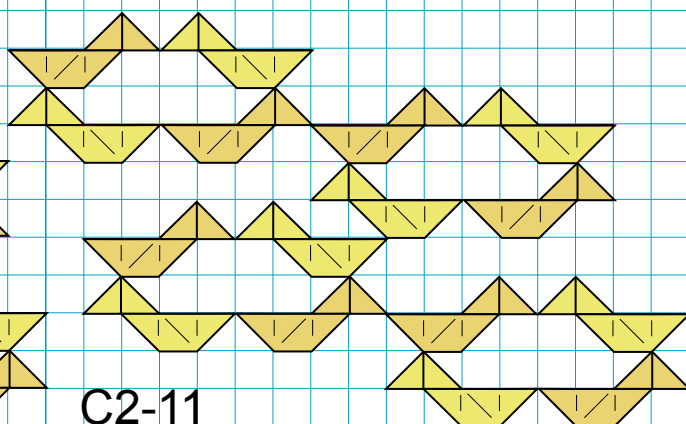
C2-8



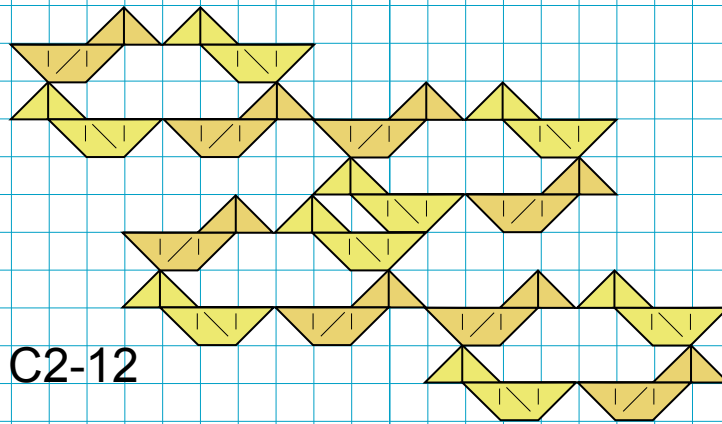
C2-9



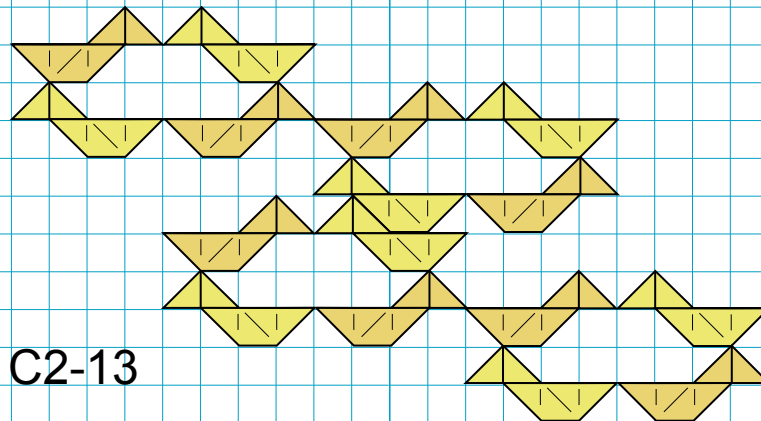
C2-9



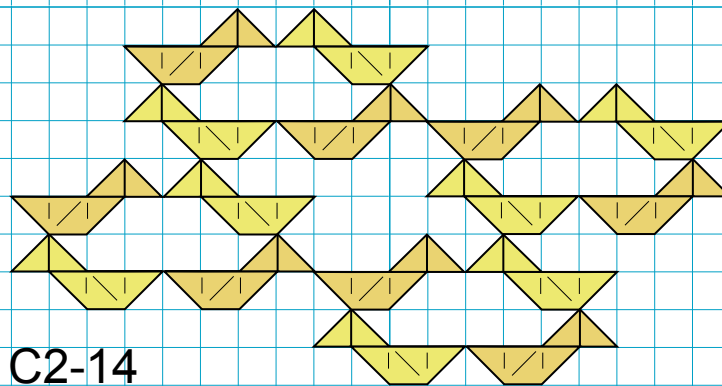
C2-11



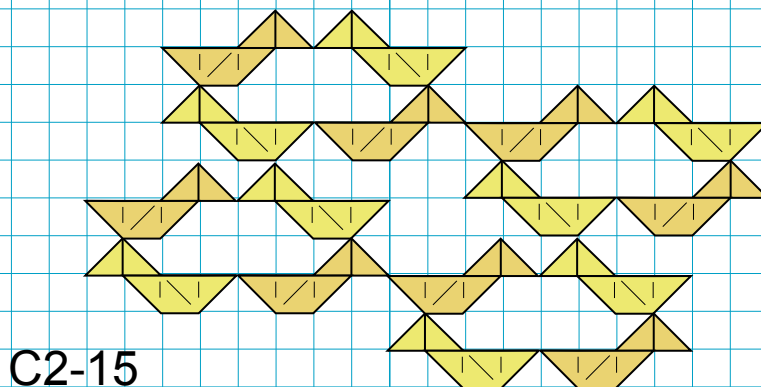
C2-12



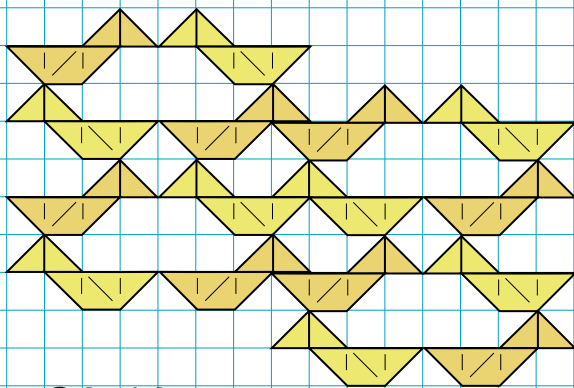
C2-13



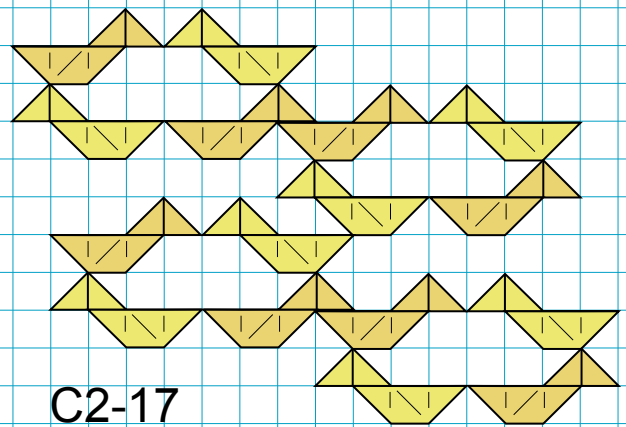
C2-14



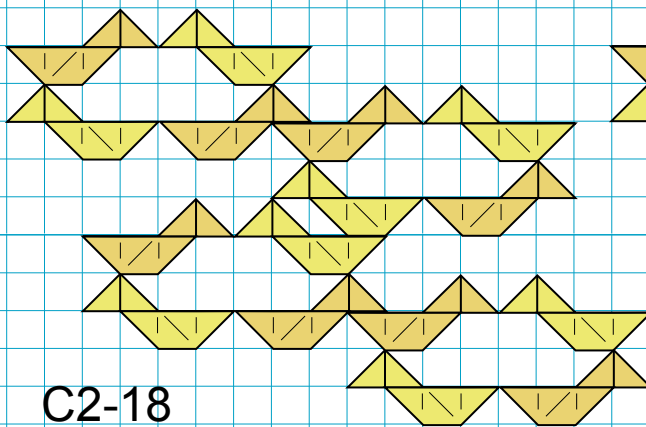
C2-15



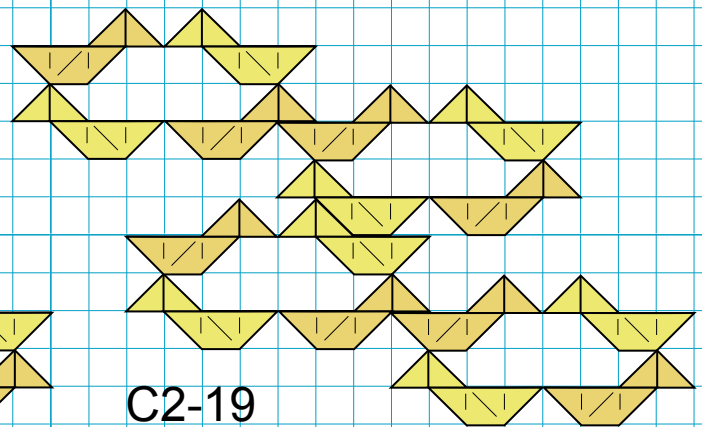
C2-16



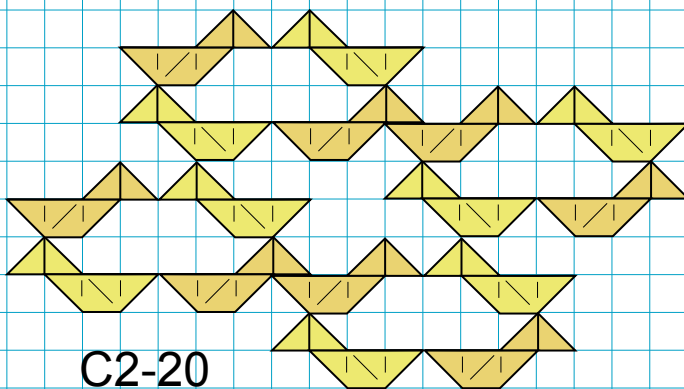
C2-17



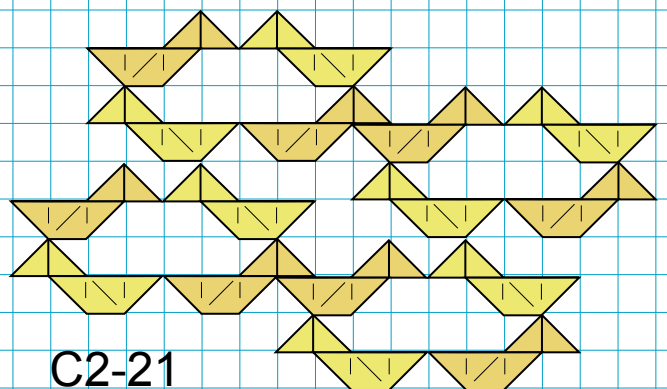
C2-18



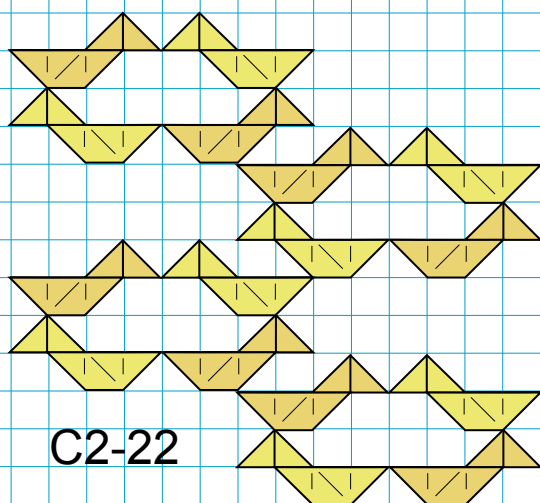
C2-19



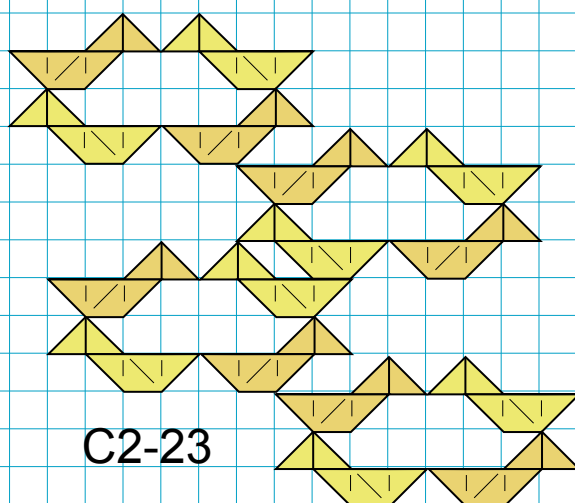
C2-20



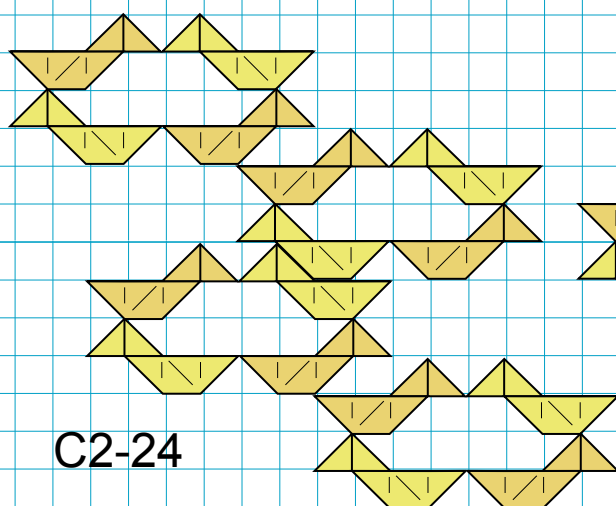
C2-21



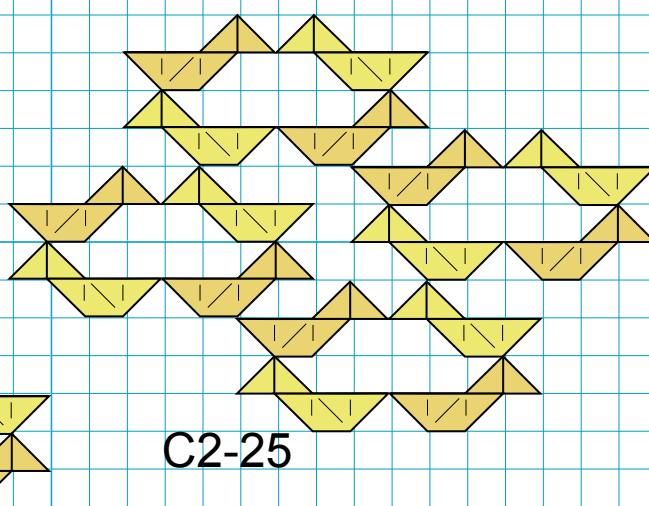
C2-22



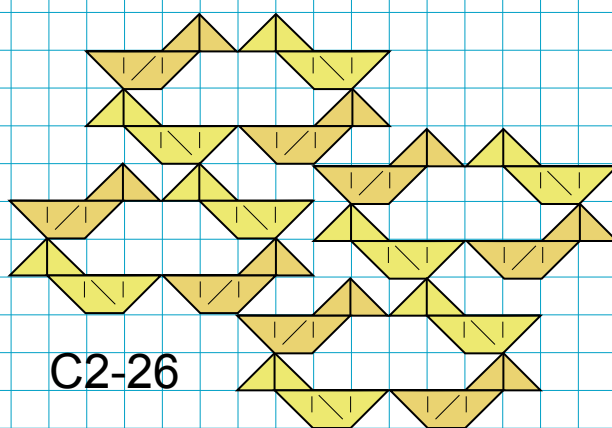
C2-23



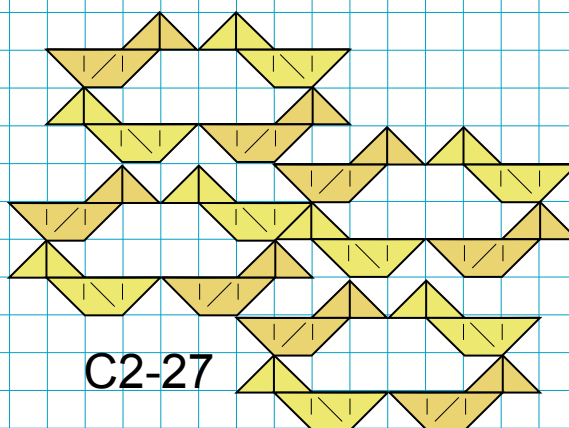
C2-24



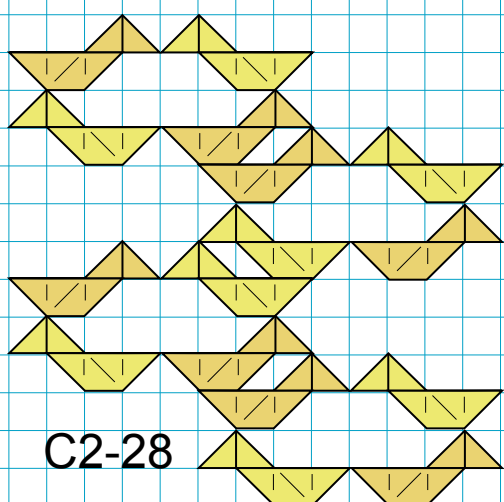
C2-25



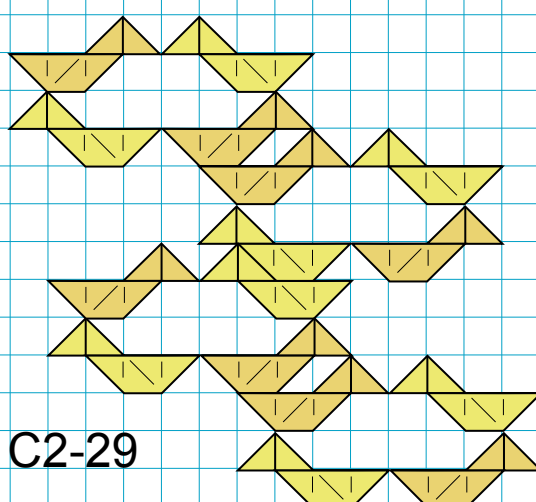
C2-26



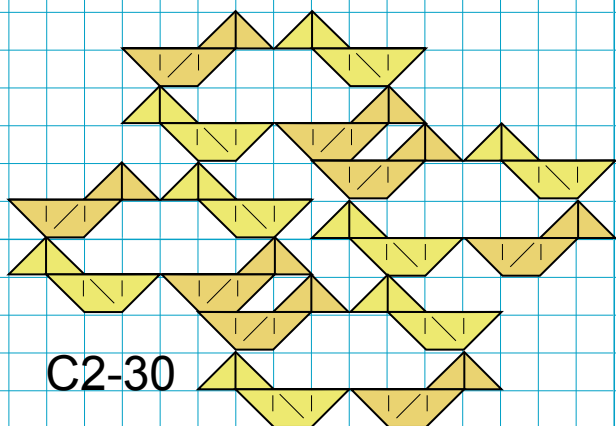
C2-27



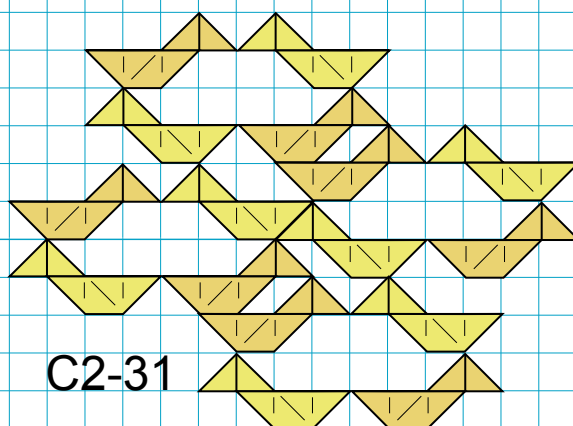
C2-28



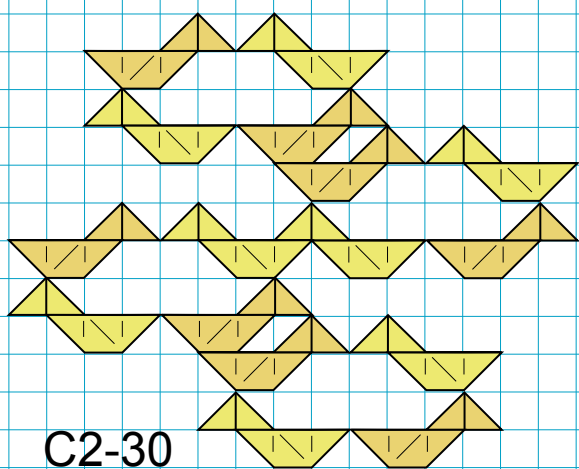
C2-29



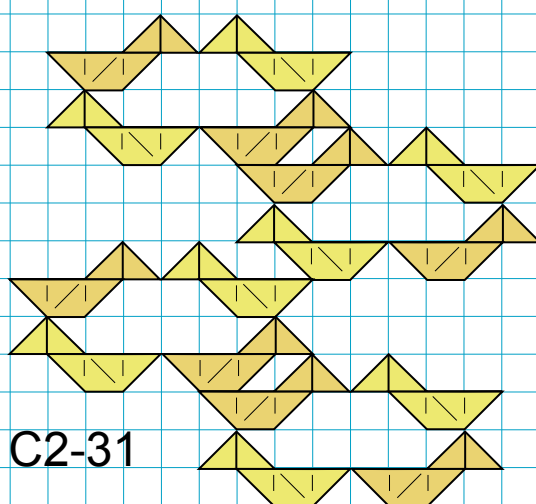
C2-30



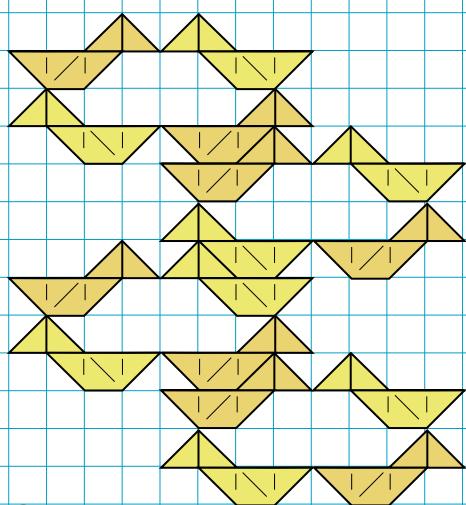
C2-31



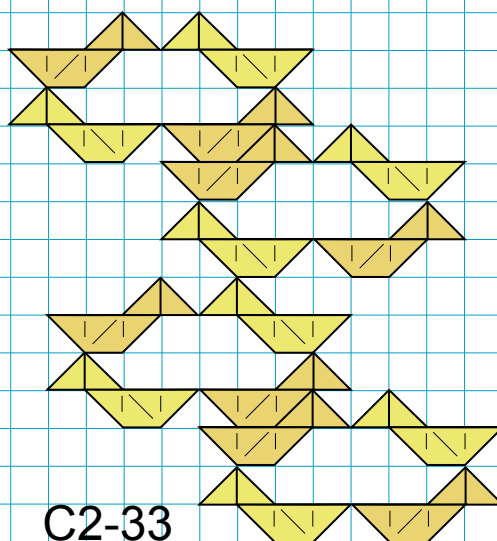
C2-30



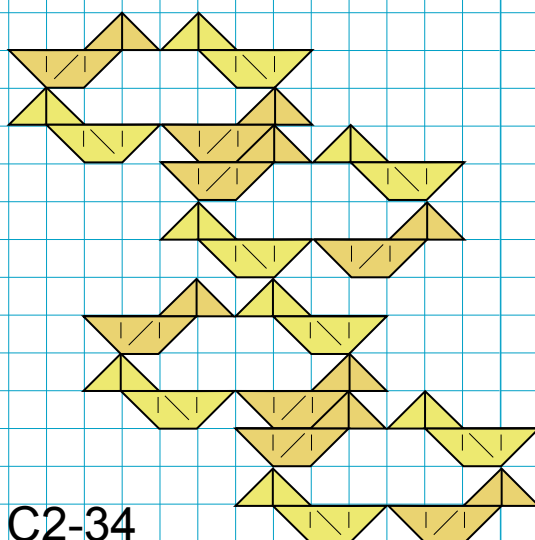
C2-31



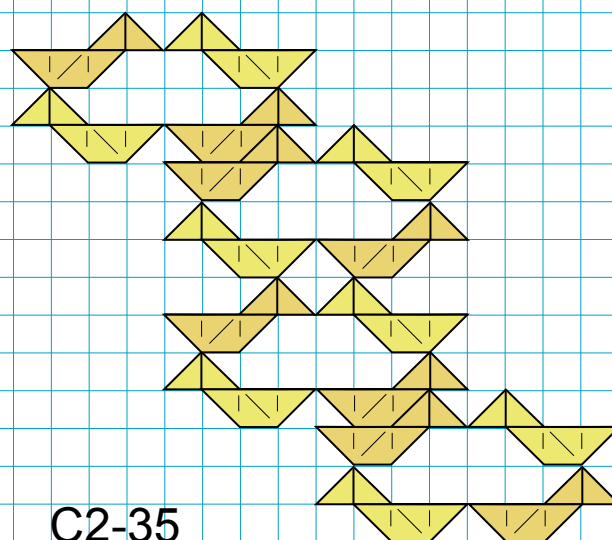
C2-32



C2-33



C2-34



C2-35

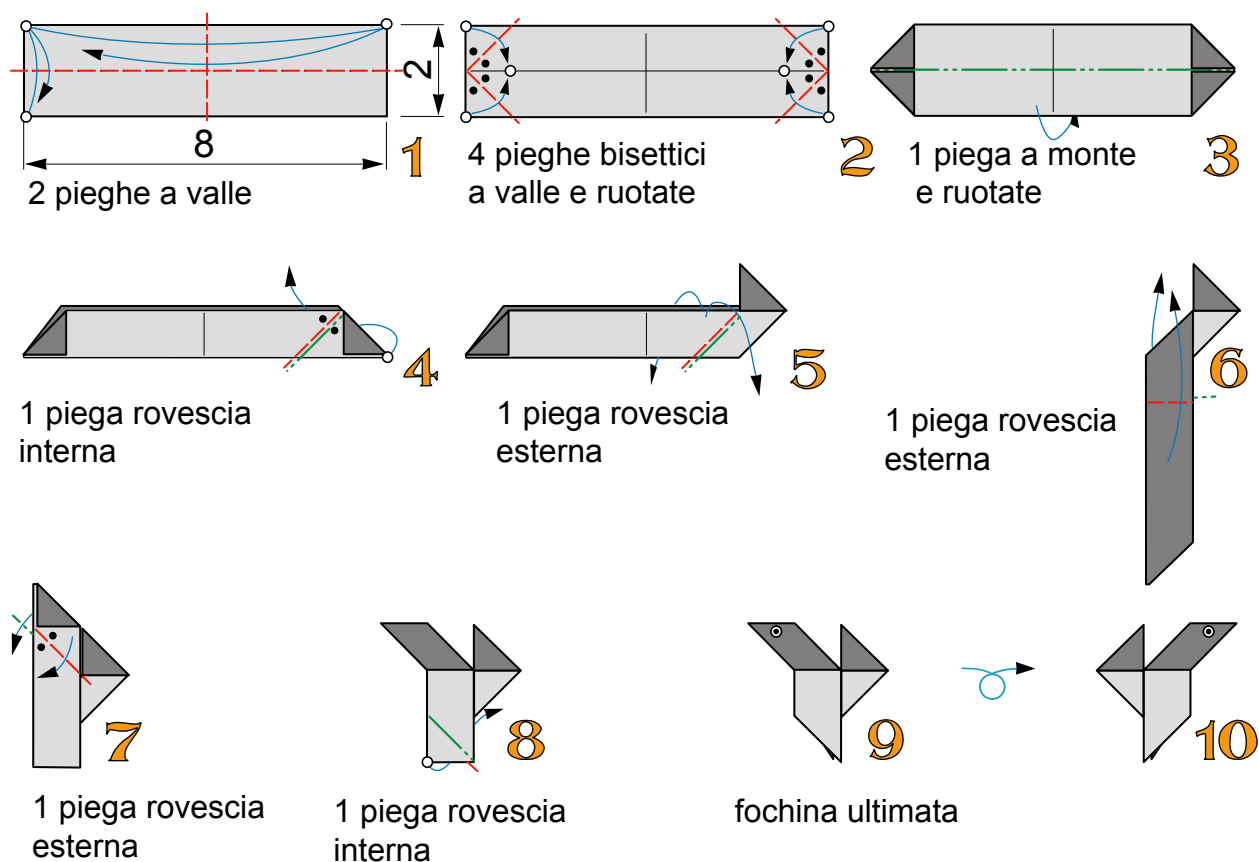
MODULO "FOCHINA"

Per questo semplice modulo ho eseguito aggregazioni di tipo A1, B1: moduli semplici e ribaltati.

Sarebbe possibile anche formare aggregazioni con moduli composti.

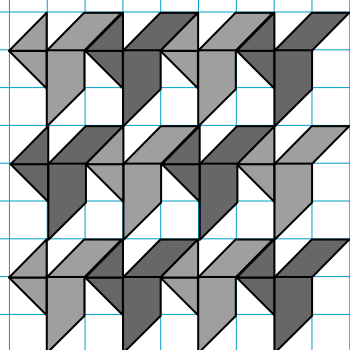
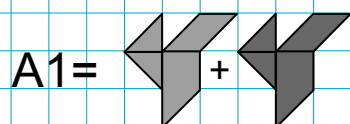
Non considero educativo formare aggregazioni con moduli ruotati.

Adoperate fogli rettangolari 4x1 mono o bicolori di 2 colori differenti, di 8 cm di lato.

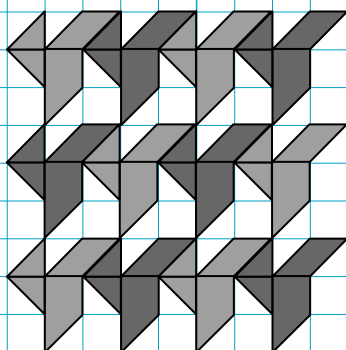


FOCHINA - COMPOSIZIONI MODULARI

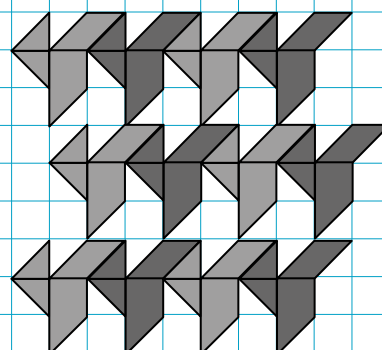
A=2 MODULI BASE



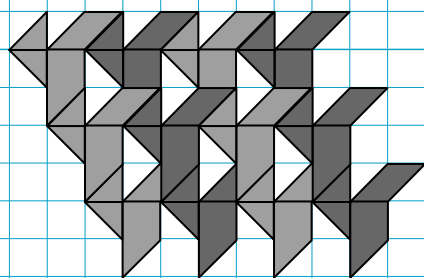
A1-1



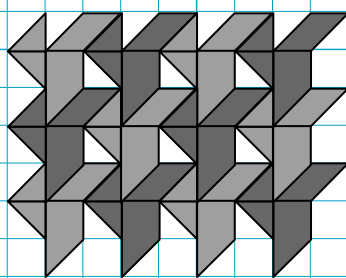
A1-2



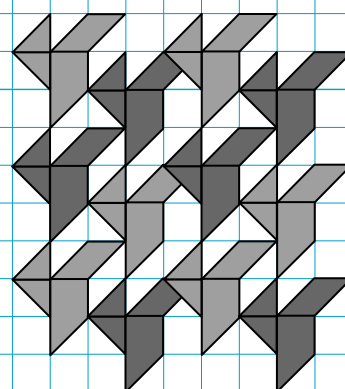
A1-3



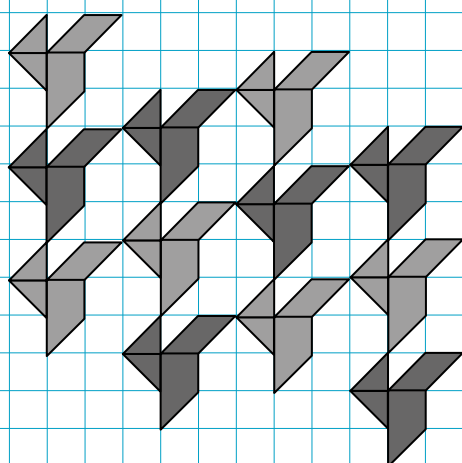
A1-4



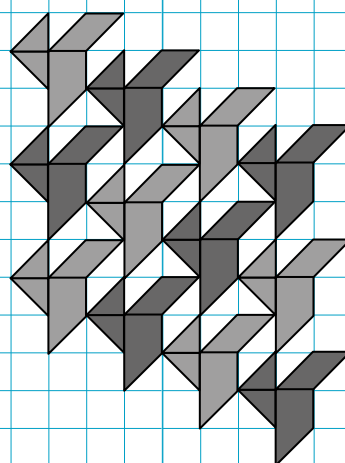
A1-5



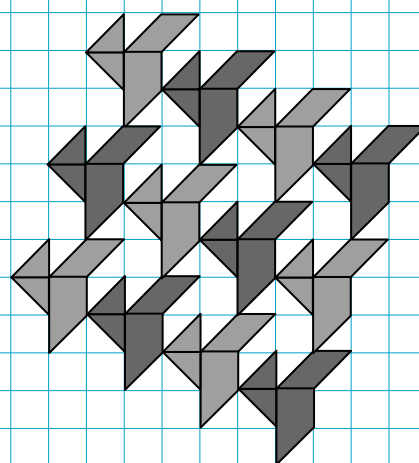
A1-6



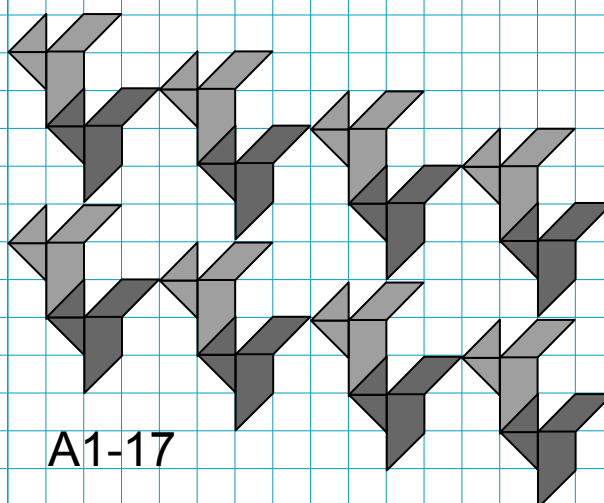
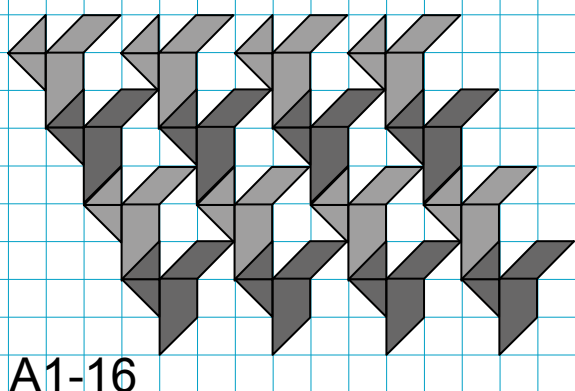
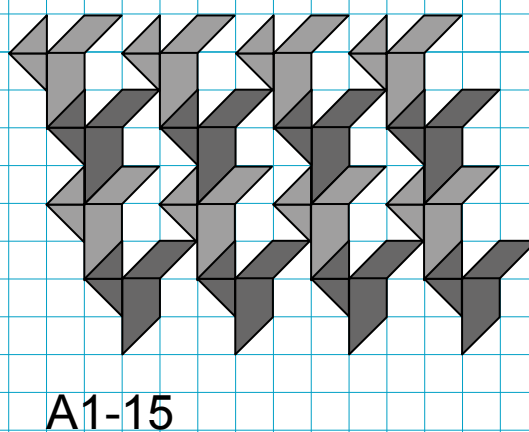
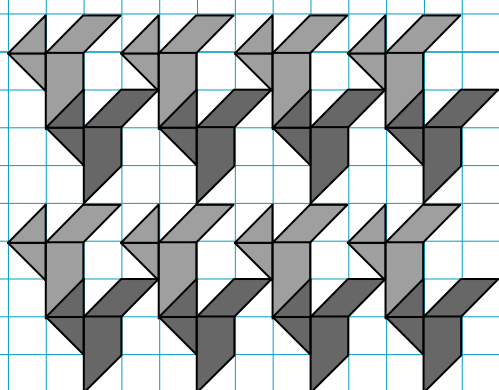
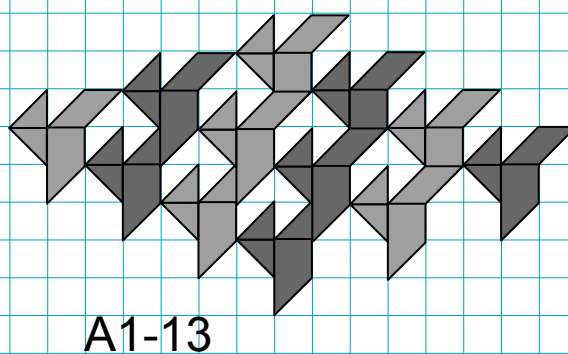
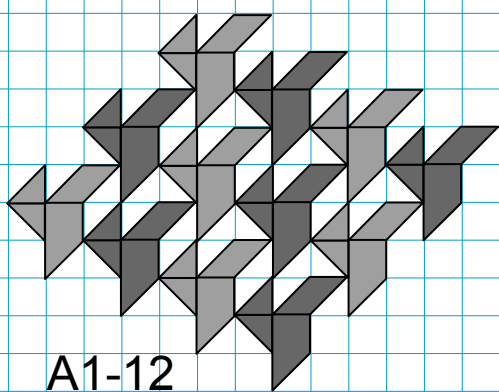
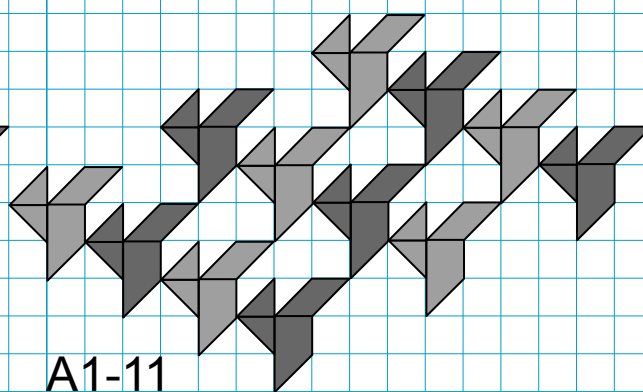
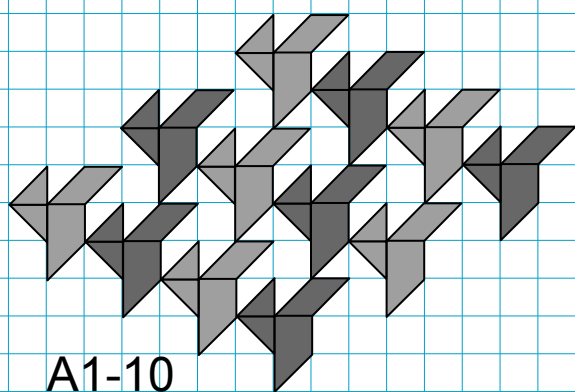
A1-7

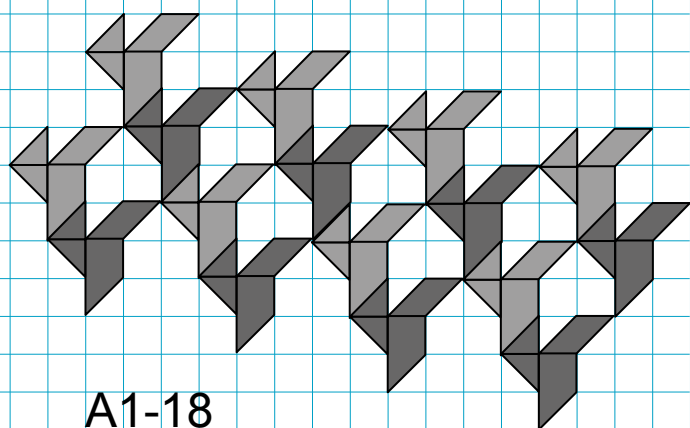


A1-8

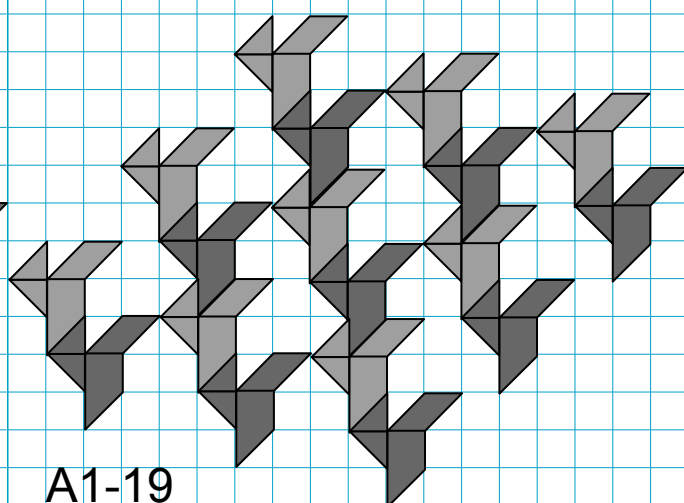


A1-9

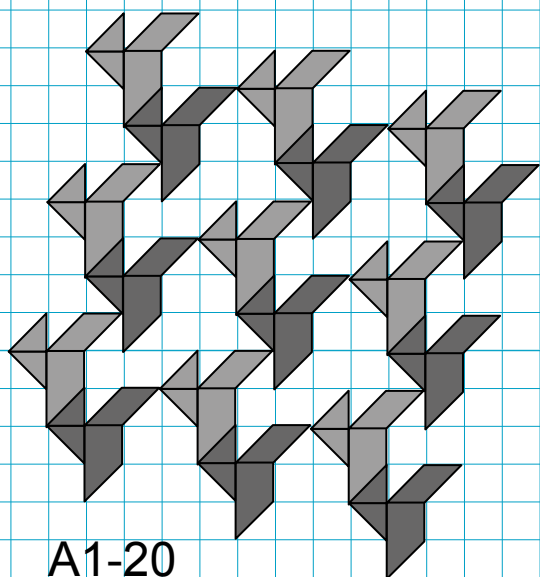




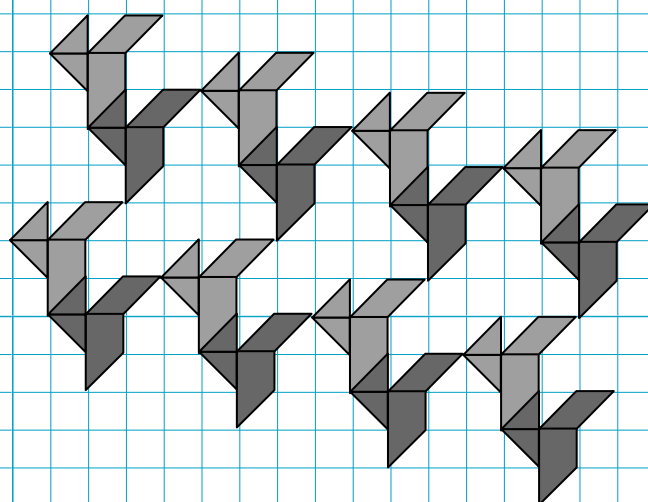
A1-18



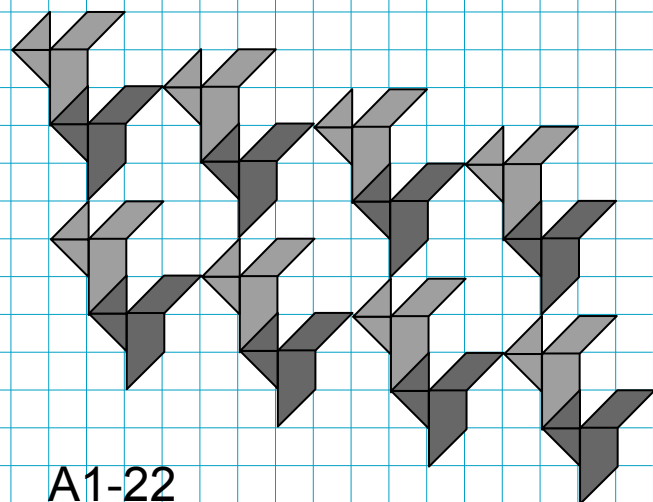
A1-19



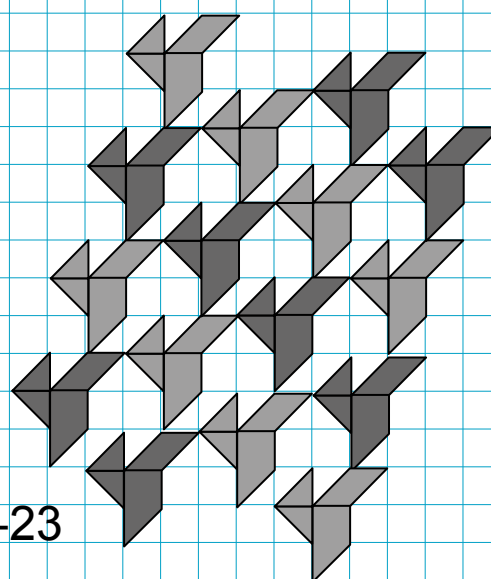
A1-20



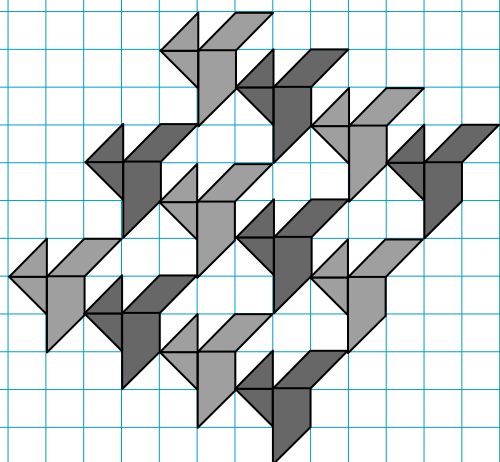
A1-21



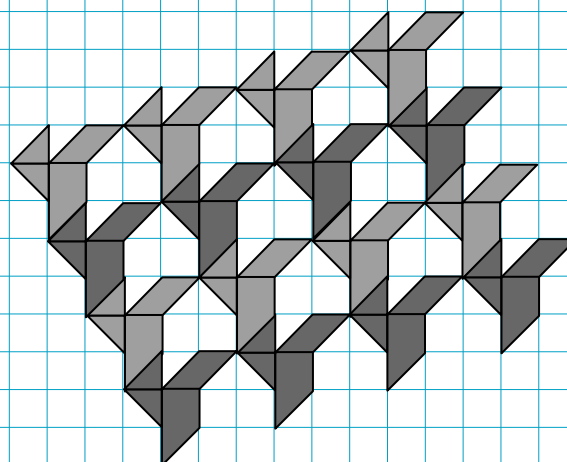
A1-22



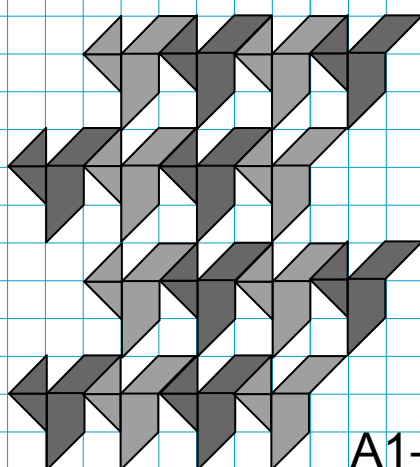
A1-23



A1-24

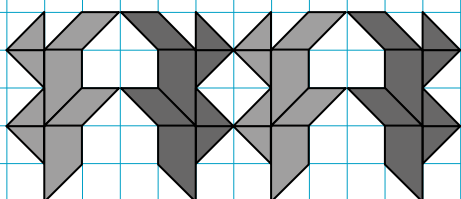
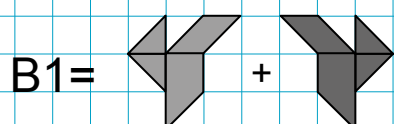


A1-25

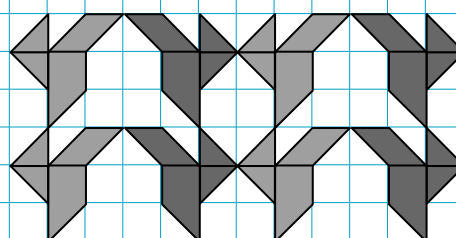


A1-26

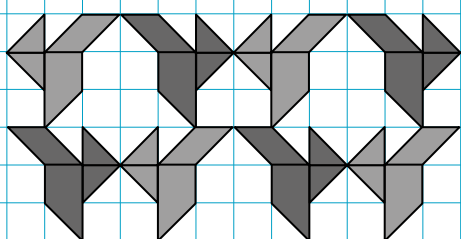
B=MODULO BASE + MODULO BASE INVERSO



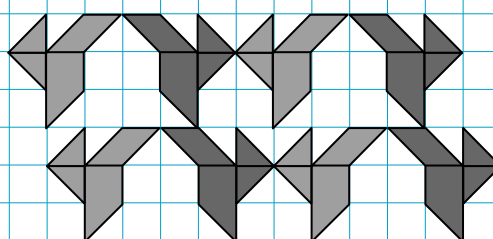
B1-1



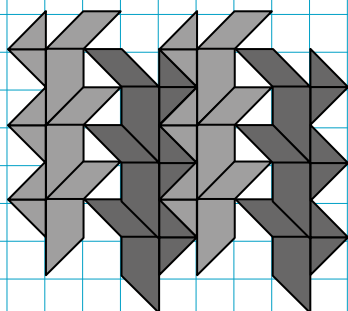
B1-2



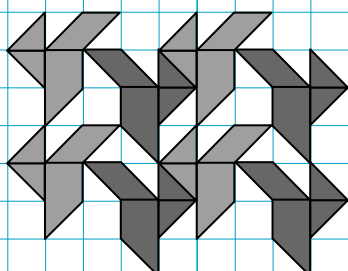
B1-3



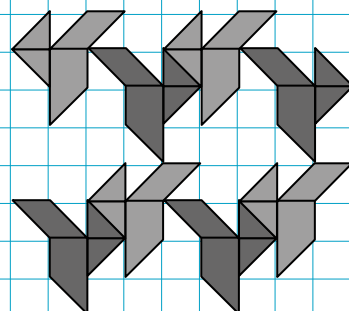
B1-4



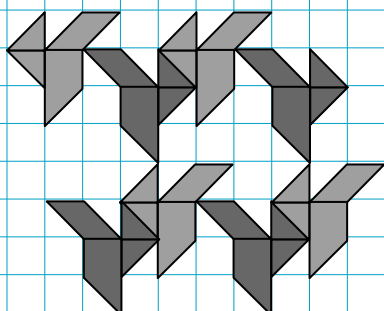
B1-5



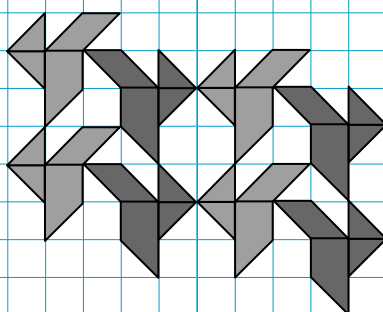
B1-6



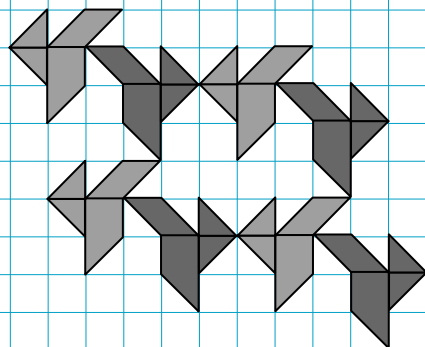
B1-7



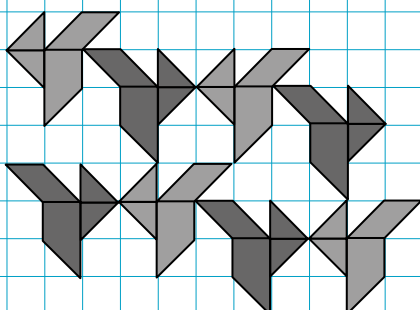
B1-8



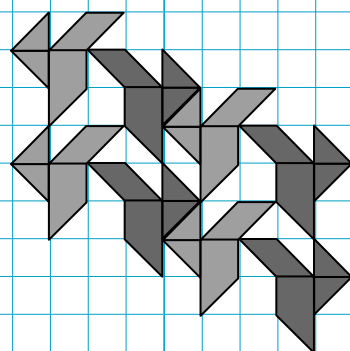
B1-9



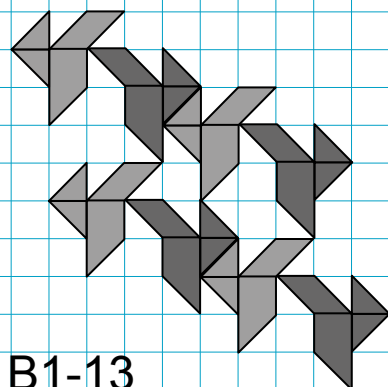
B1-10



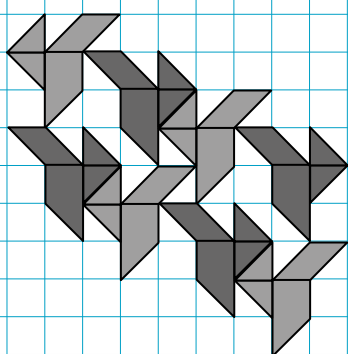
B1-11



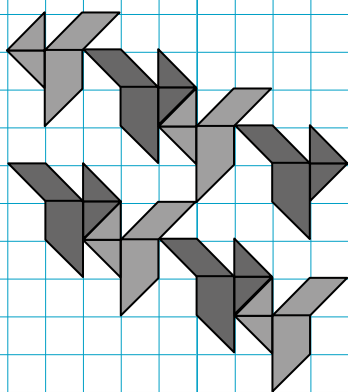
B1-12



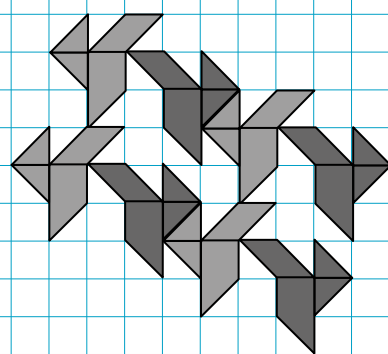
B1-13



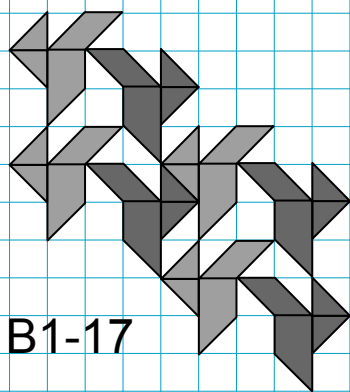
B1-14



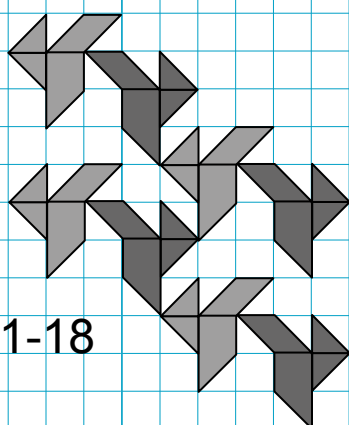
B1-15



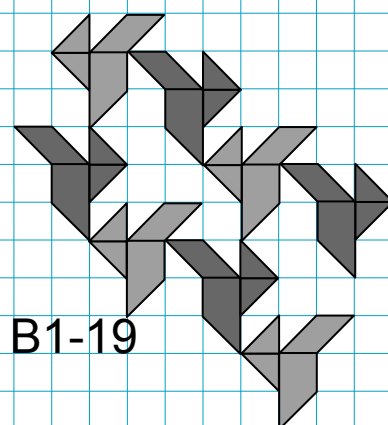
B1-16



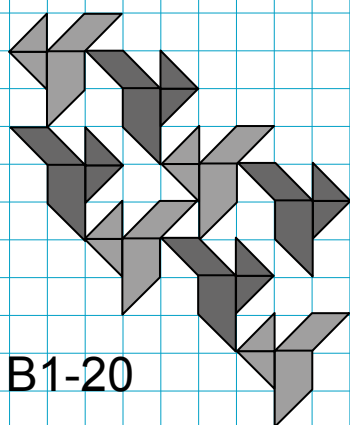
B1-17



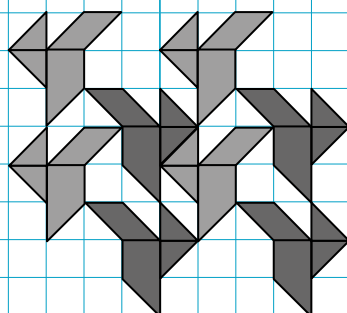
B1-18



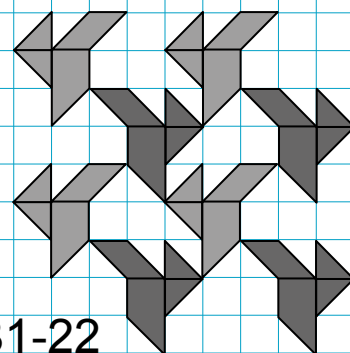
B1-19



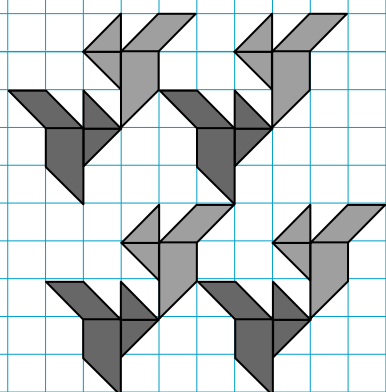
B1-20



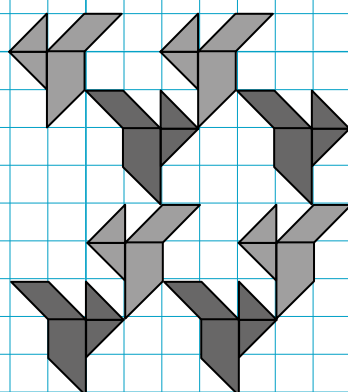
B1-21



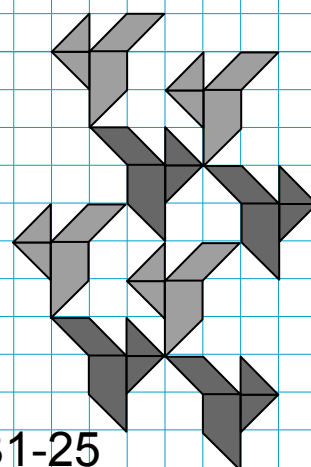
B1-22



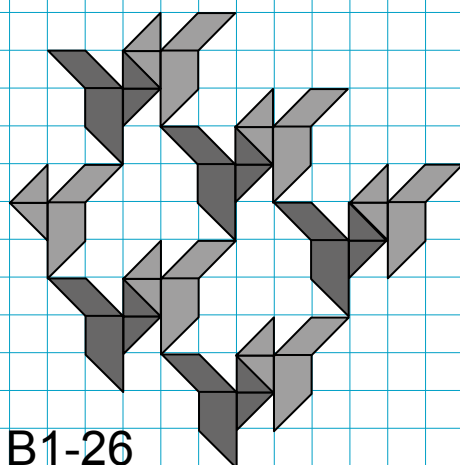
B1-23



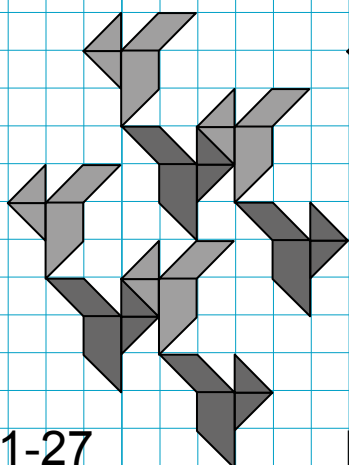
B1-24



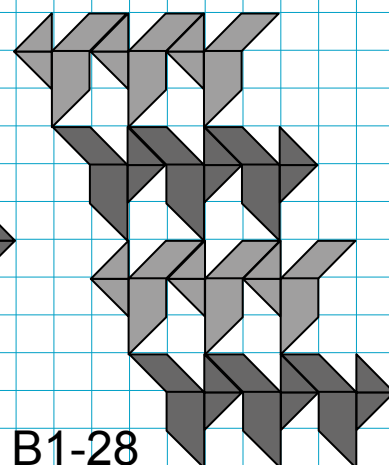
B1-25



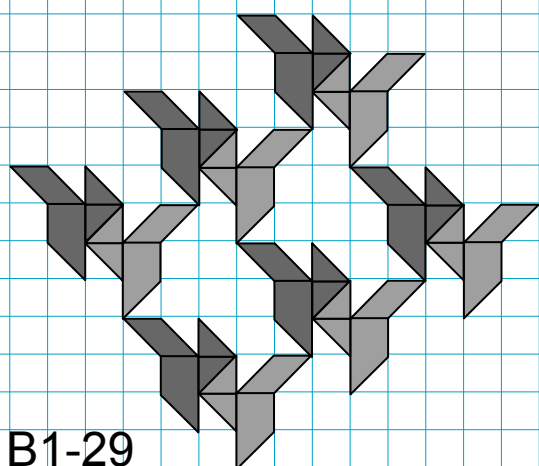
B1-26



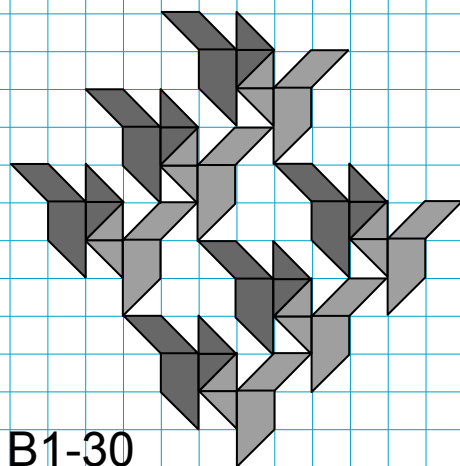
B1-27



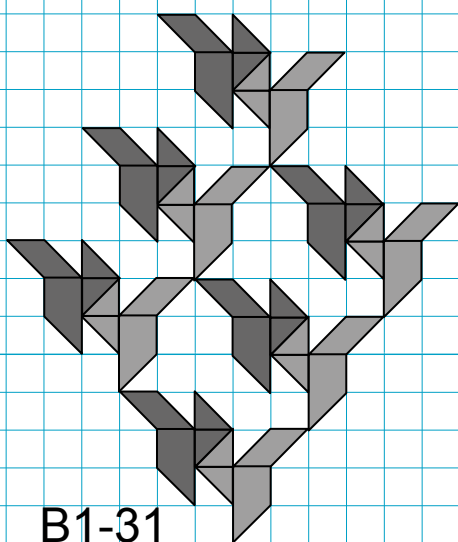
B1-28



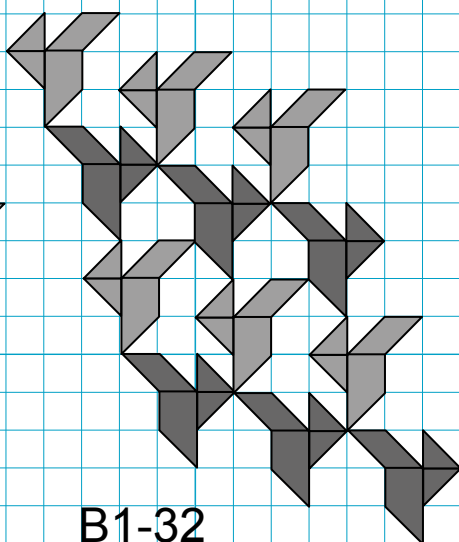
B1-29



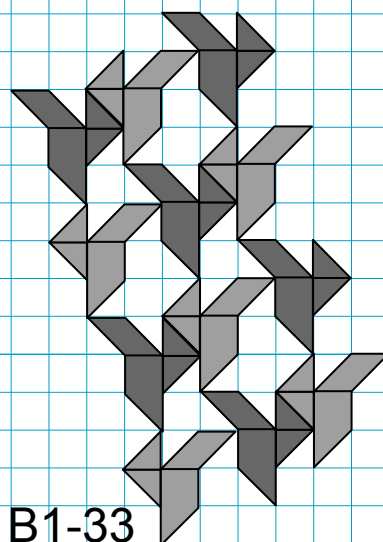
B1-30



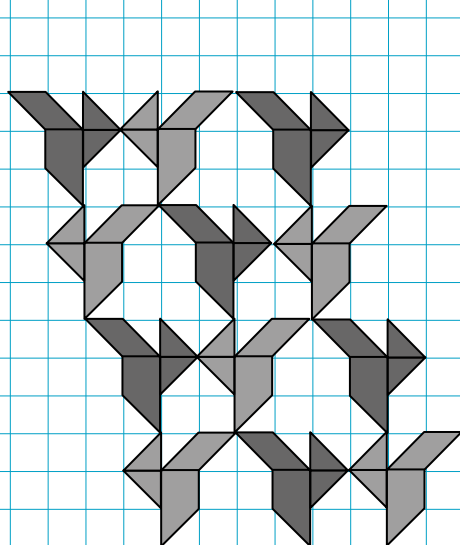
B1-31



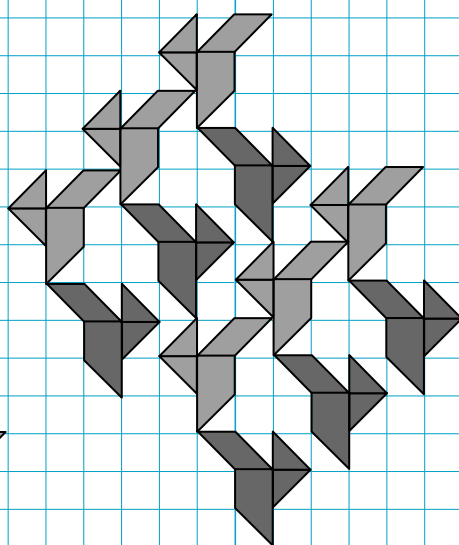
B1-32



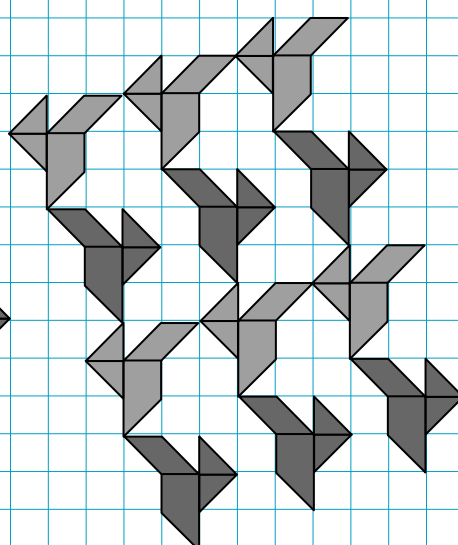
B1-33



B1-34



B1-35



B1-36

MODULO "Casetta" sinistro

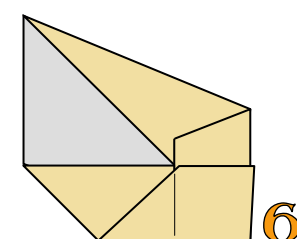
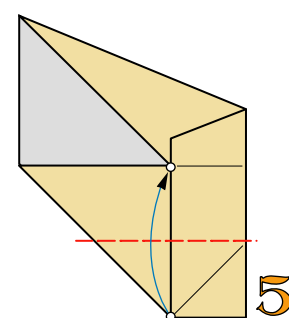
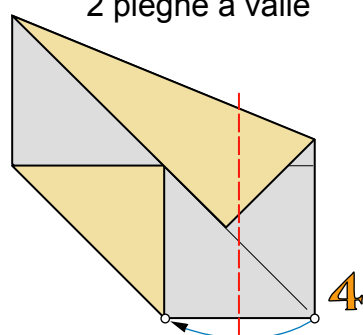
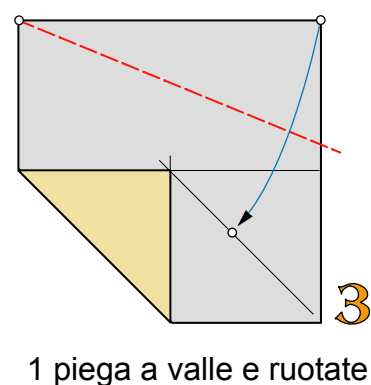
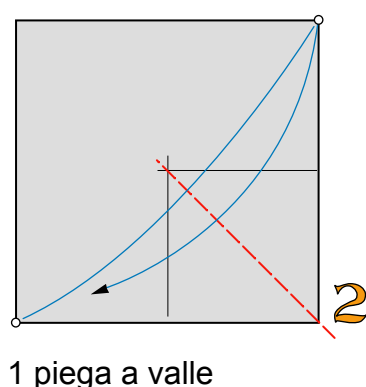
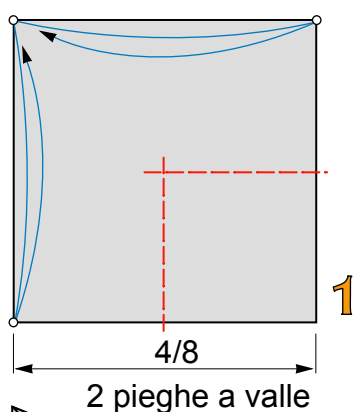
Per questo modulo ho eseguito aggregazioni di tipo A1, B1 e C1: moduli semplici, ribaltati e composti.

Per i moduli ribaltati ho dovuto rifare gli schemi di piegatura.

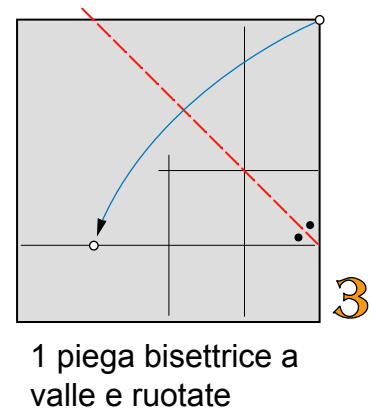
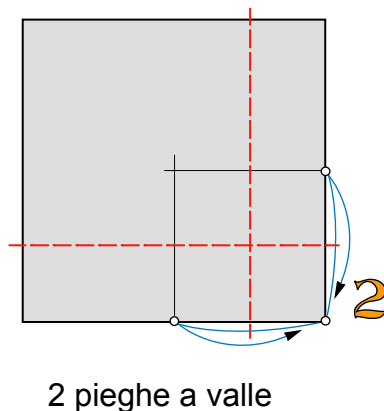
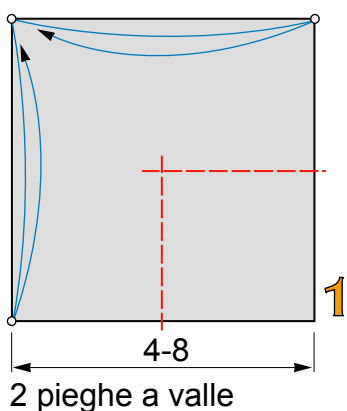
Trattandosi di case, non considero logico formare aggregazioni con moduli ruotati.

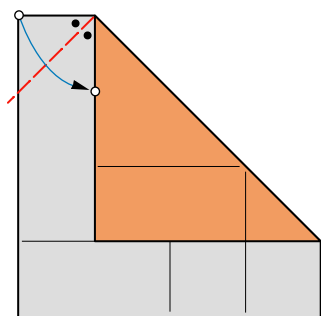
Per la costruzione di questo modulo occorrono 3 fogli quadrati monocolori, di colore differente, di 4-8 cm di lato.

ELEMENTO FIANCO



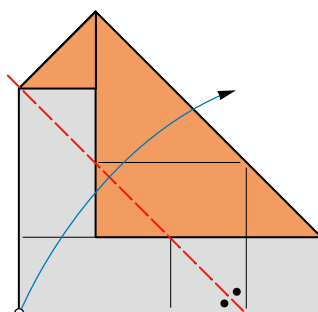
ELEMENTO TETTO





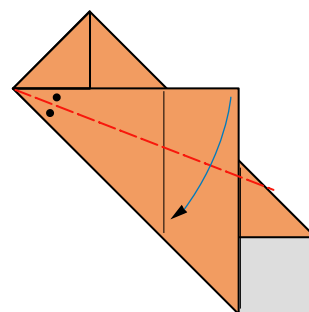
4

1 piega bisettrice a valle e ruotate



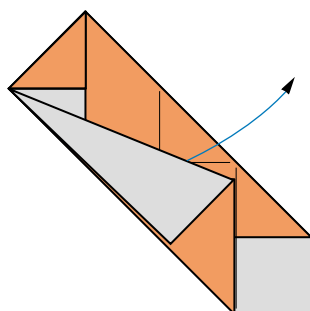
5

1 piega bisettrice a valle e ruotate



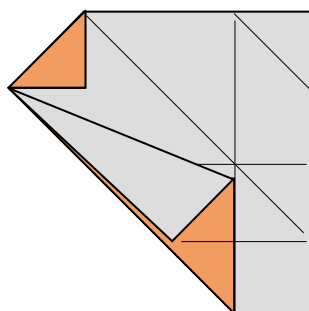
6

1 piega bisettrice a valle e ruotate



7

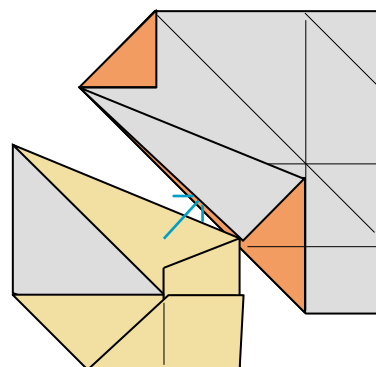
Estraete



8

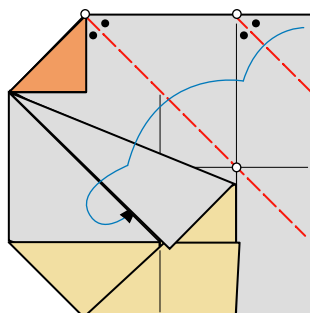
Elemento tetto ultimato

UNIONE DI FIANCO CON TETTO



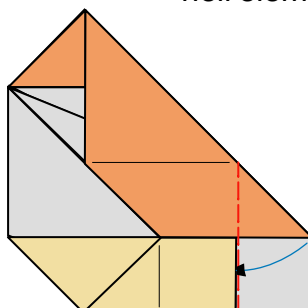
1

Inserite il fianco nell'elemento tetto



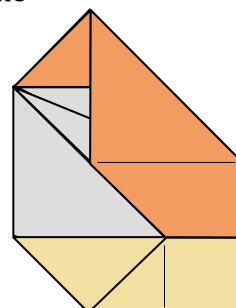
2

2 pieghe bisettrici a valle in successione e ruotate



3

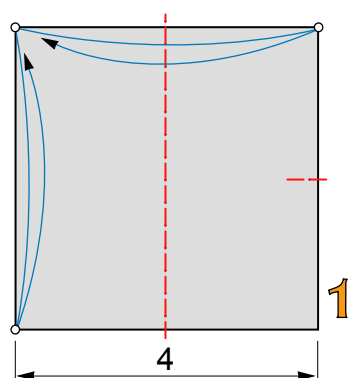
1 piega a valle e ruotate



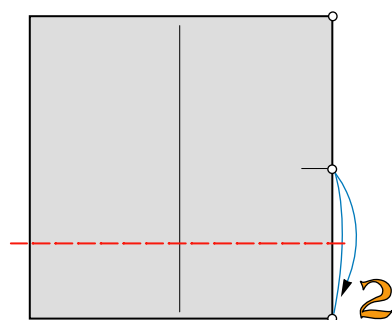
4

Elemento fianco ed elemento tetto uniti

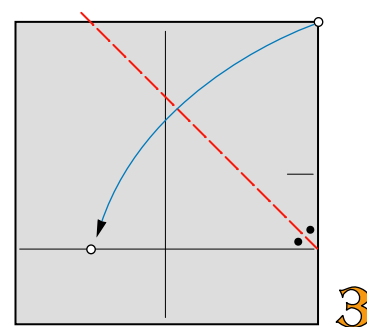
ELEMENTO FRONTE



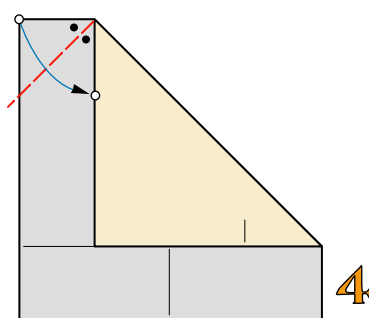
2 pieghe a valle



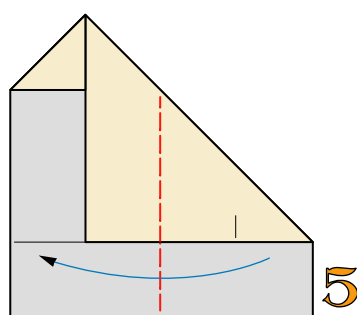
1 piega a valle



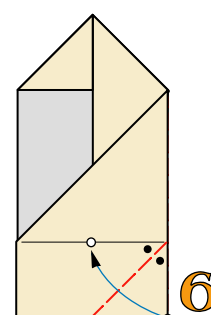
1 piega bisettrice a valle e ruotate



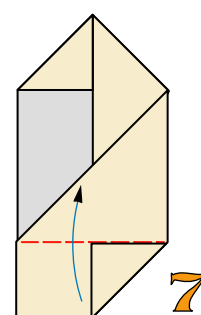
1 piega bisettrice a valle e ruotate



1 piega a valle e ruotate

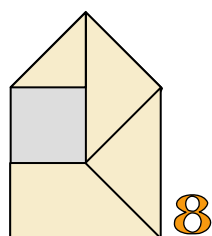


1 piega bisettrice a valle e ruotate

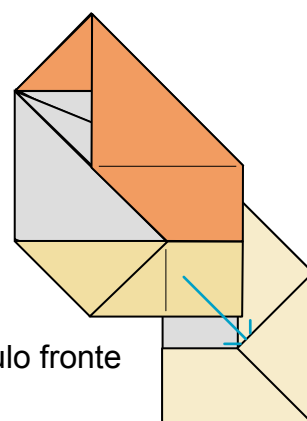


1 piega a valle e ruotate

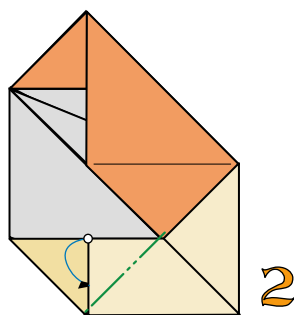
UNIONE DEI 3 MODULI



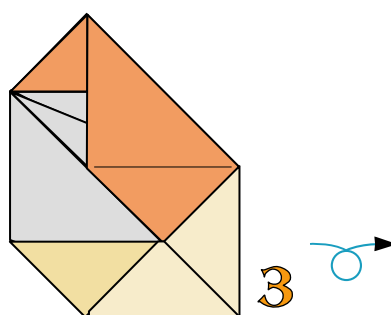
Elemento fronte ultimato



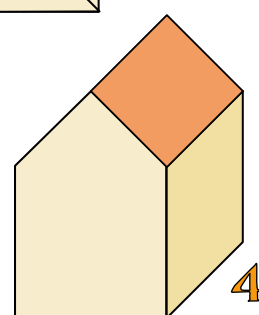
Inserite il fianco e il tetto nel modulo fronte



1 piega a valle ed intascate bloccando l'unione



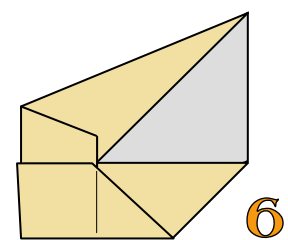
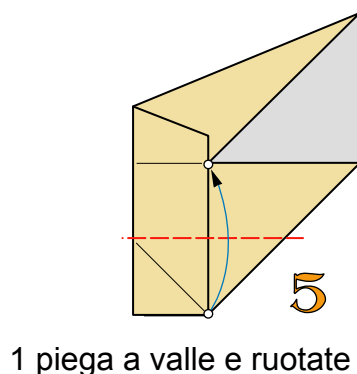
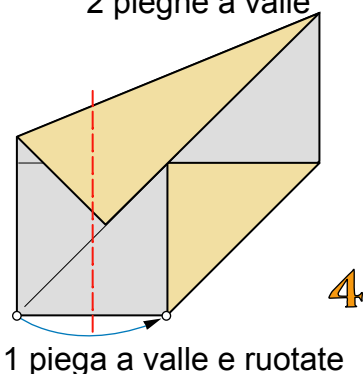
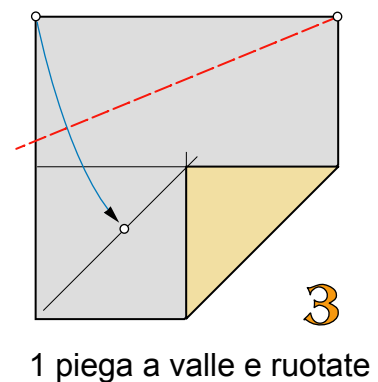
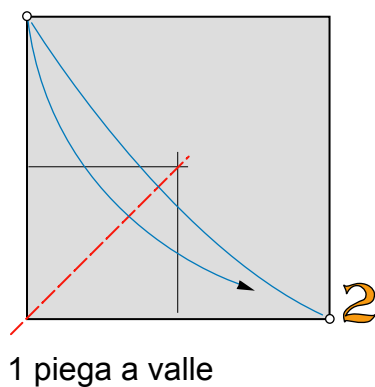
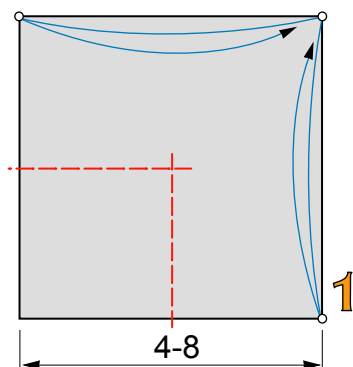
Retro modulo casetta ultimato



Modulo casetta sinistro ultimato

MODULO "Casetta" destro

ELEMENTO FIANCO

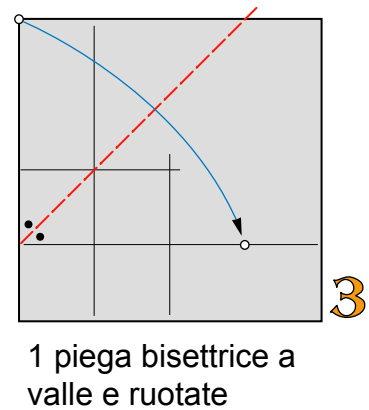
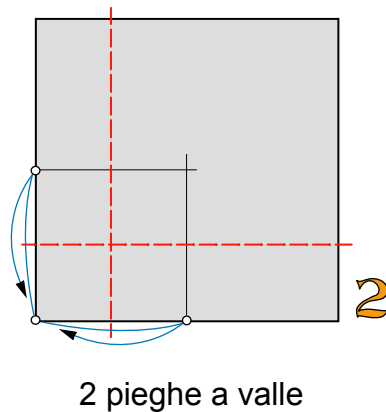
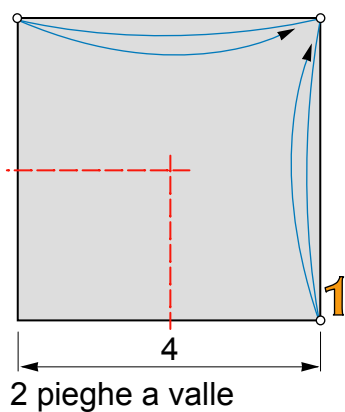


1 piega a valle e ruotate

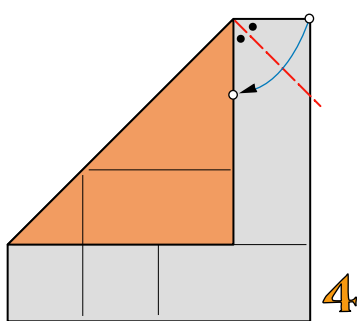
1 piega a valle e ruotate

Elemento fianco ultimato

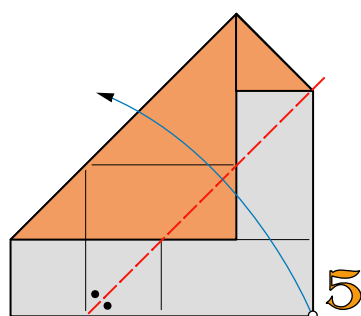
ELEMENTO TETTO



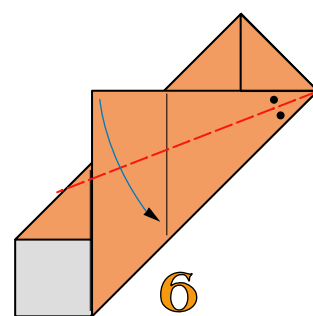
1 piega bisettrice a valle e ruotate



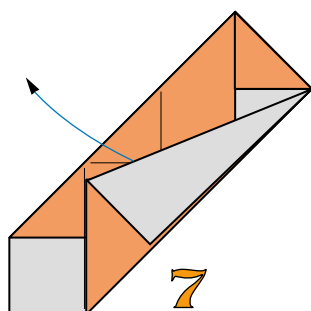
1 piega bisettrice a valle e ruotate



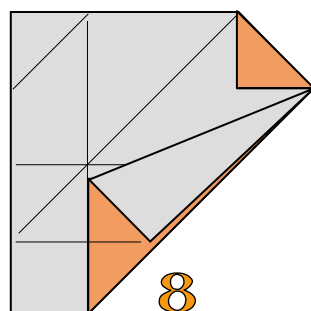
1 piega bisettrice a valle e ruotate



1 piega bisettrice a valle e ruotate

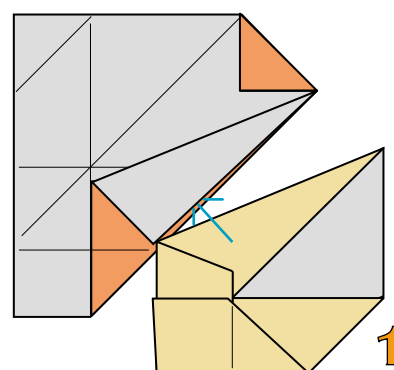


Estraete

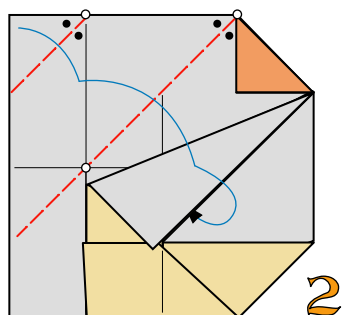


Elemento tetto ultimato

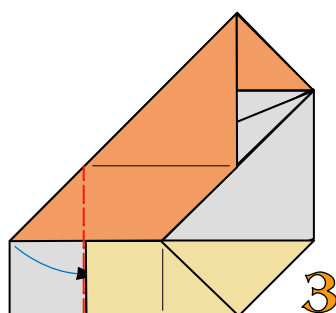
UNIONE DI FIANCO CON TETTO



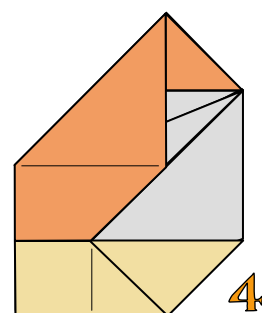
Inserite il fianco nell'elemento tetto



2 pieghe bisettrici a valle in successione e ruotate

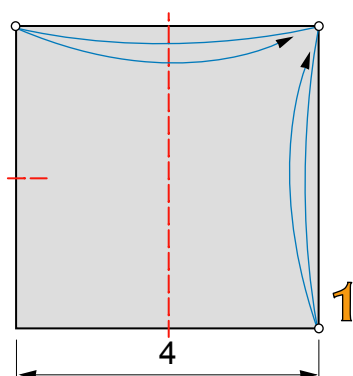


1 piega a valle e ruotate

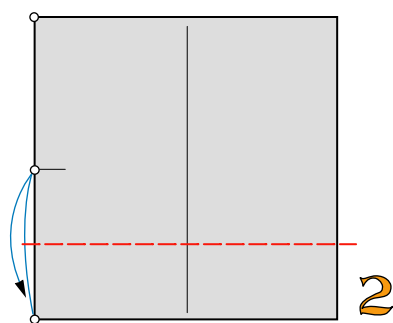


Elemento fianco ed elemento tetto uniti

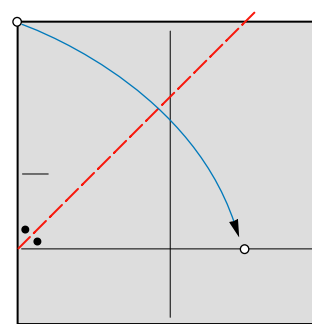
ELEMENTO FRONTE



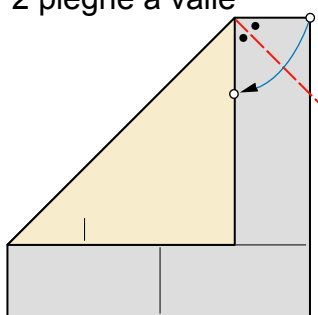
2 pieghe a valle



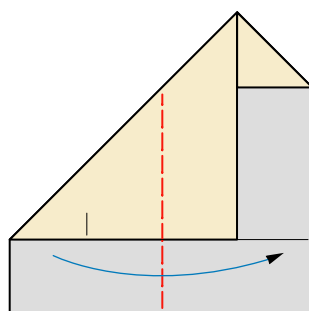
1 piega a valle



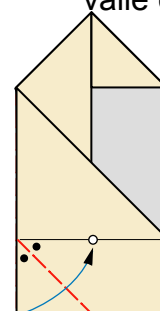
1 piega bisettrice a valle e ruotate



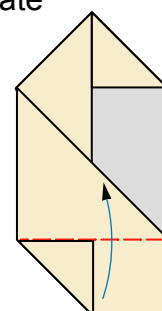
1 piega bisettrice a valle e ruotate



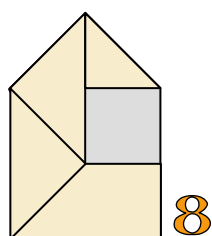
1 piega a valle e ruotate



1 piega bisettrice a valle e ruotate



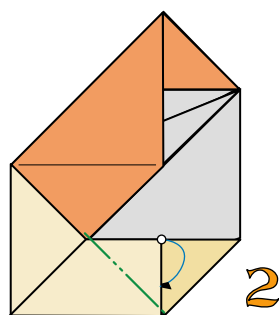
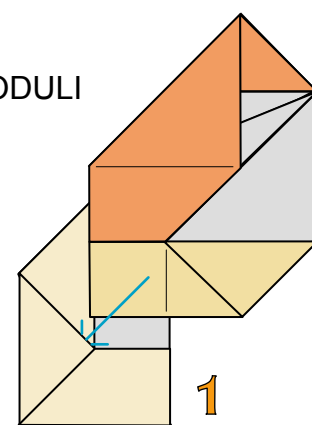
1 piega a valle e ruotate



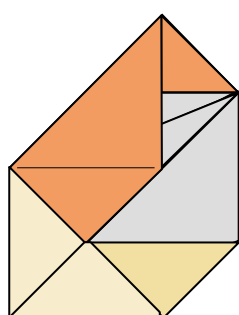
Elemento fronte ultimato

UNIONE DEI 3 MODULI

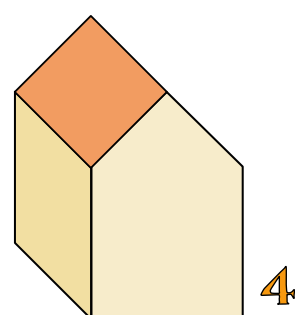
Inserite il fianco e il tetto nel modulo fronte



1 piega a valle ed intascate bloccando l'unione



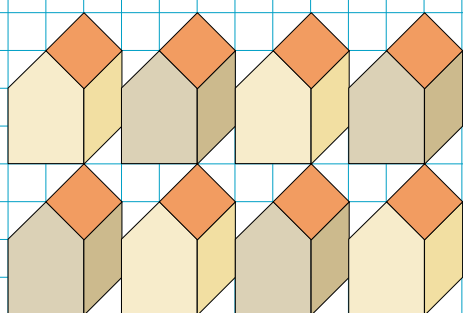
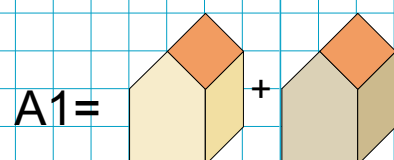
Retro modulo casetta ultimato



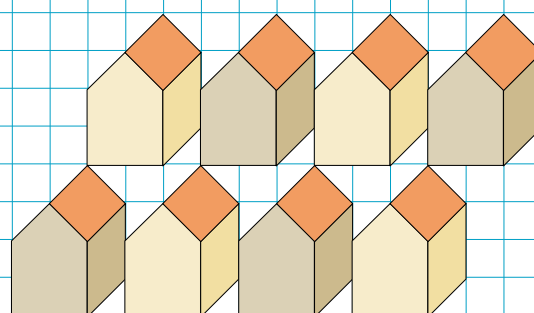
Modulo casetta sinistro ultimato

CASSETTA - COMPOSIZIONI MODULARI

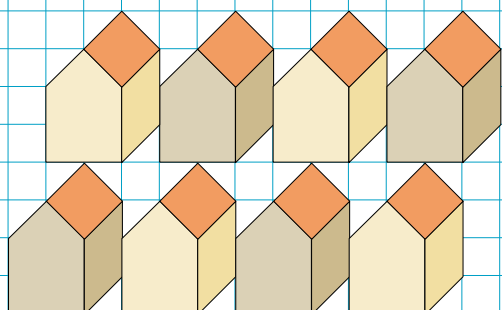
A= UNIONE MODULI BASE



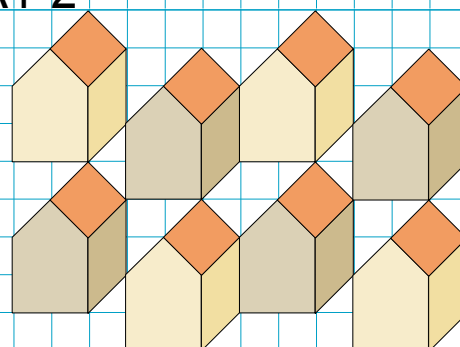
A1-1



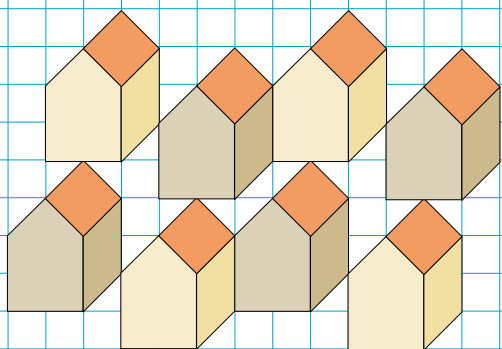
A1-2



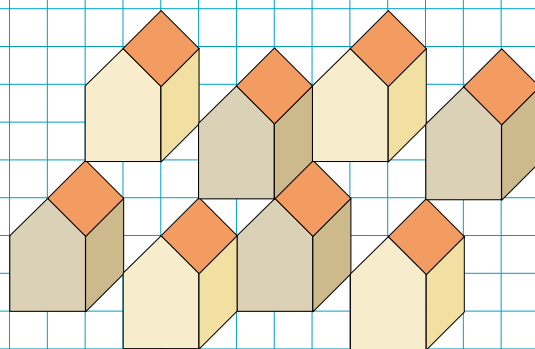
A1-3



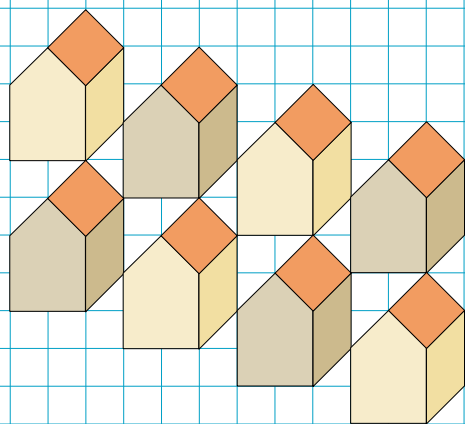
A1-4



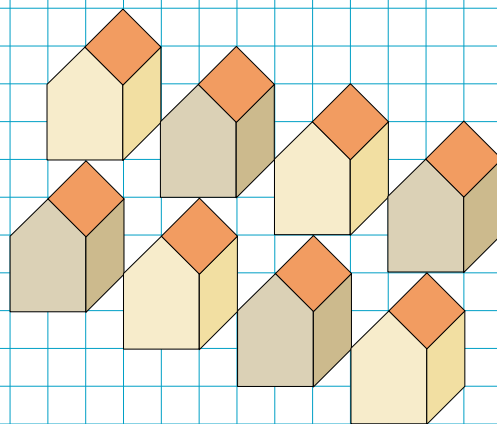
A1-5



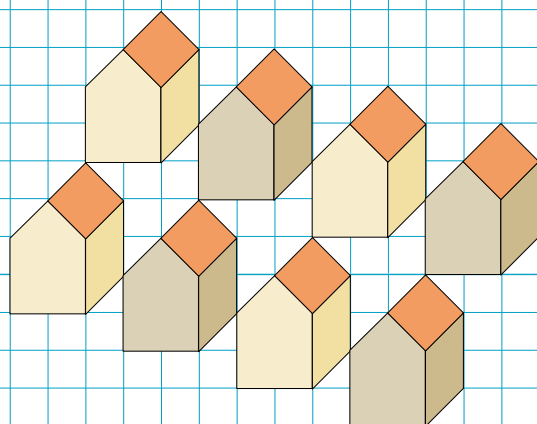
A1-6



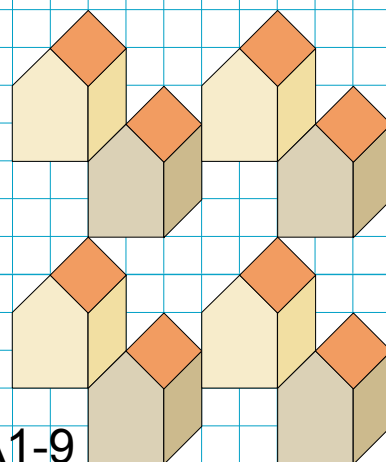
A1-7



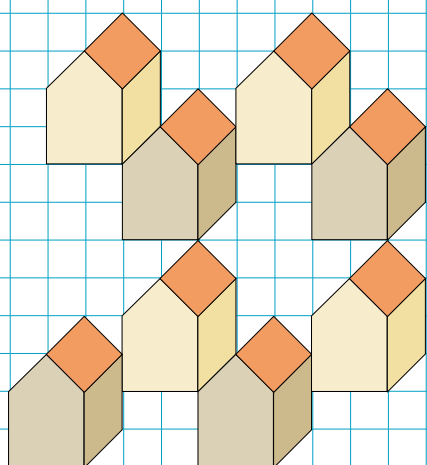
A1-8



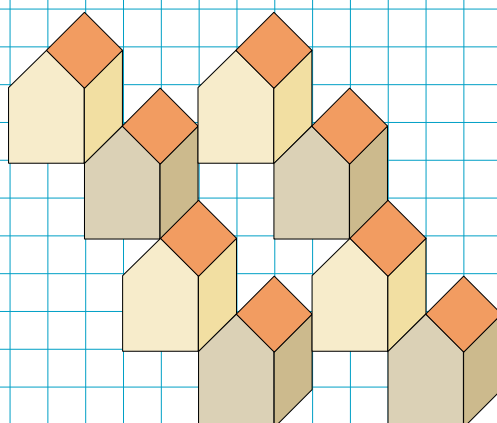
A1-8



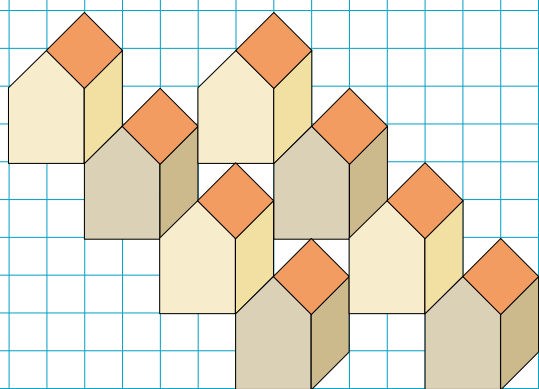
A1-9



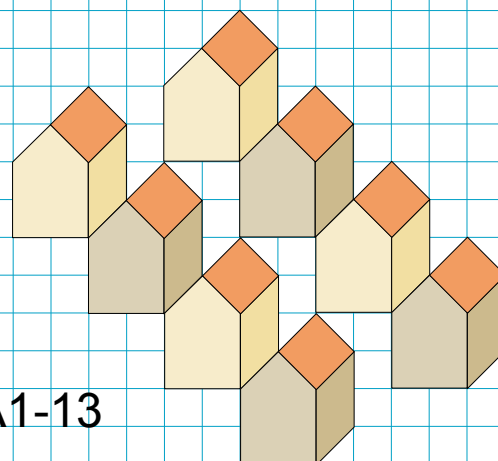
A1-10



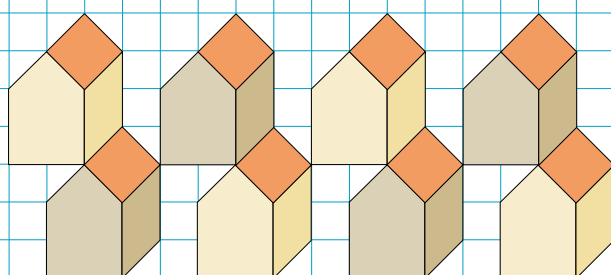
A1-11



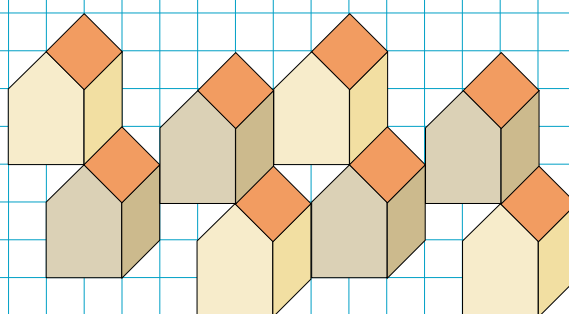
A1-12



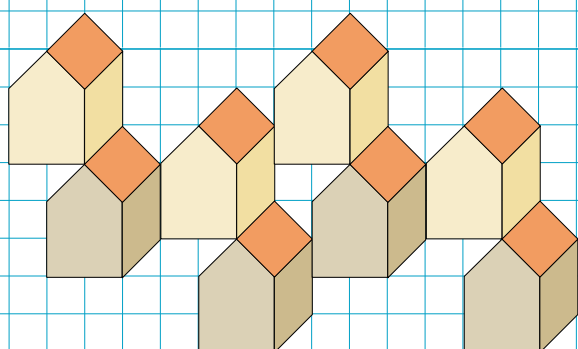
A1-13



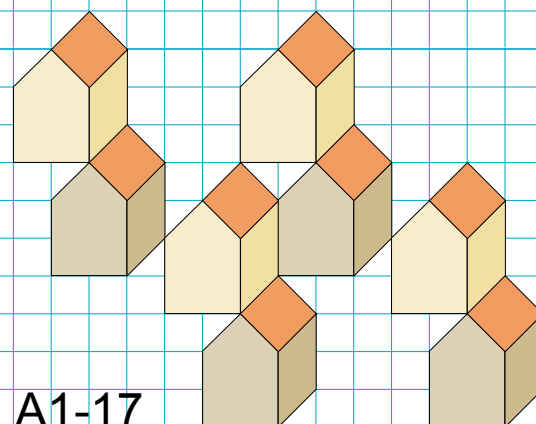
A1-14



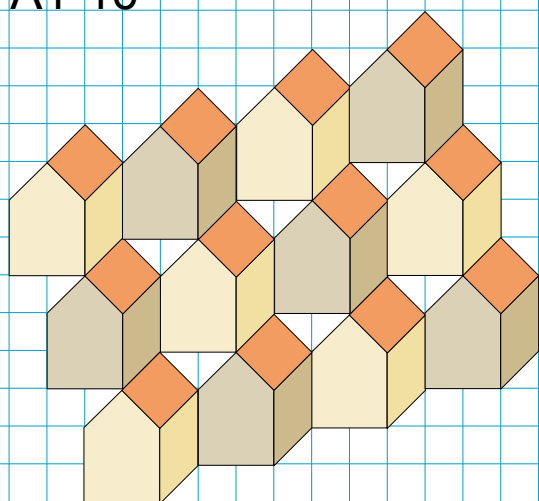
A1-15



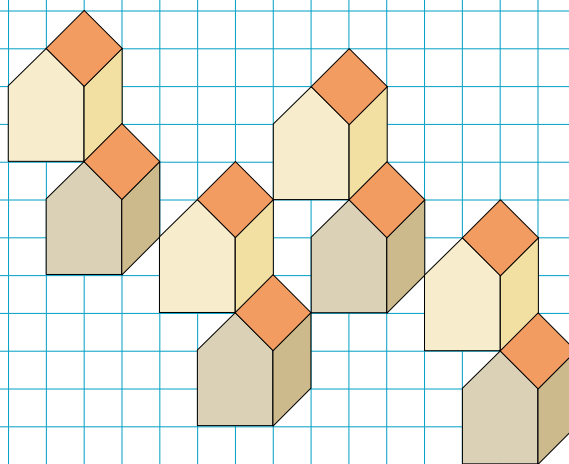
A1-16



A1-17



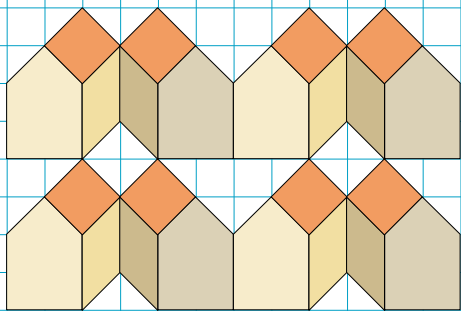
A1-18



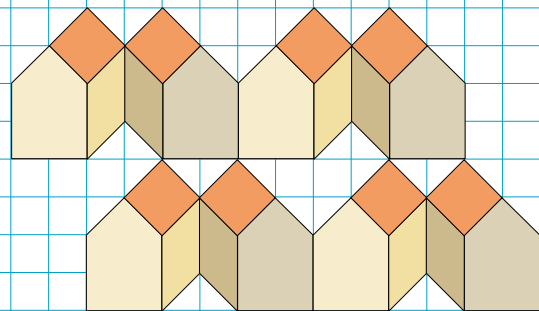
A1-19

B=MODULO BASE + MODULO BASE INVERSO

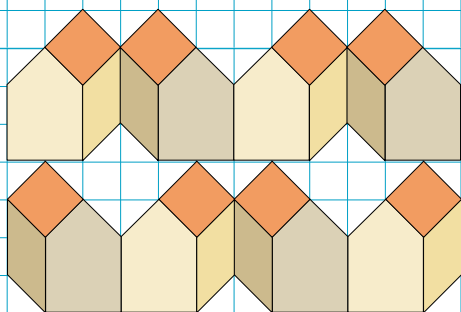
$$B1 = \text{[Yellow cube with orange top]} + \text{[Grey cube with orange top]}$$



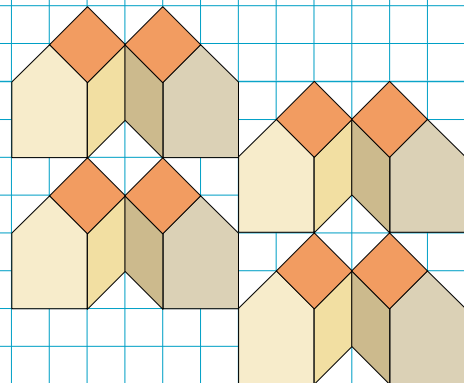
B1-1



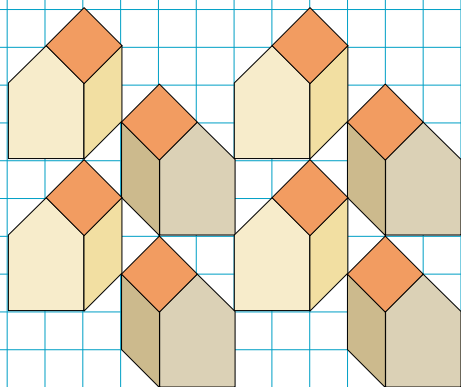
B1-2



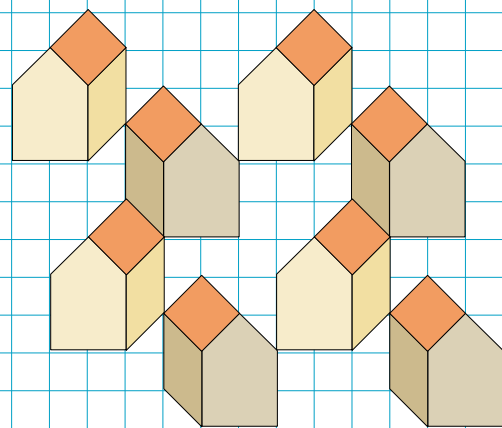
B1-3



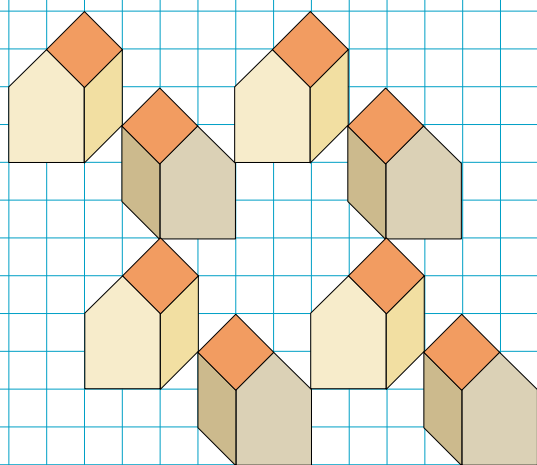
B1-4



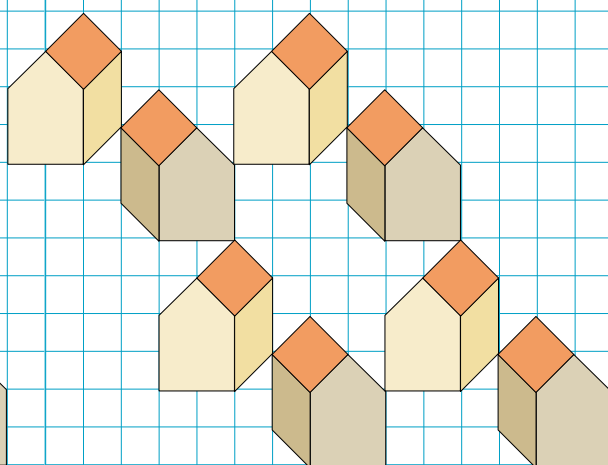
B1-4



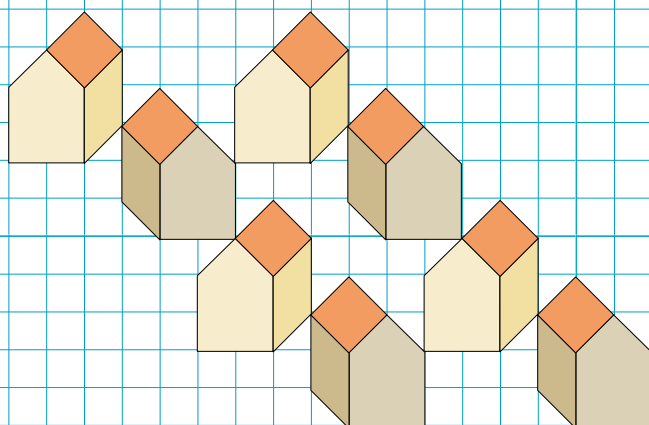
B1-5



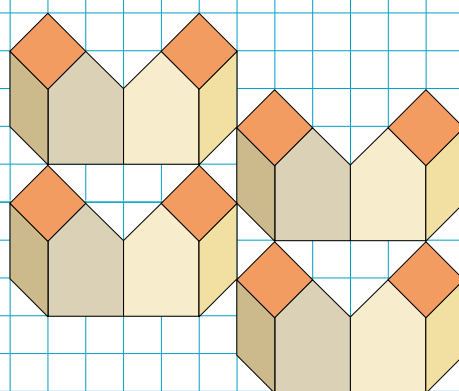
B1-6



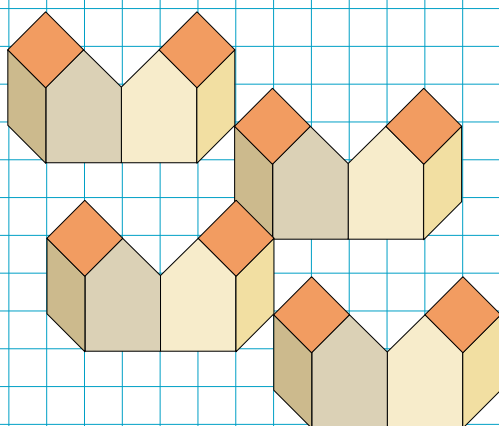
B1-7



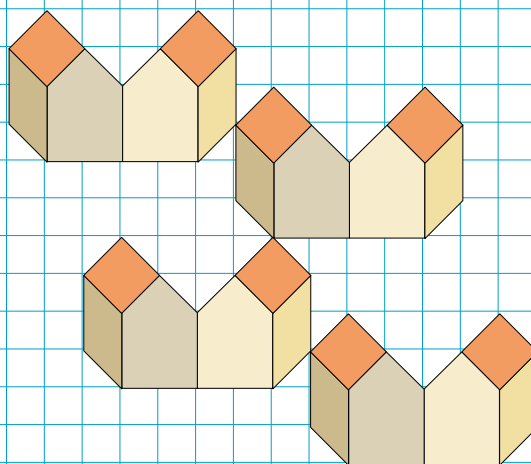
B1-8



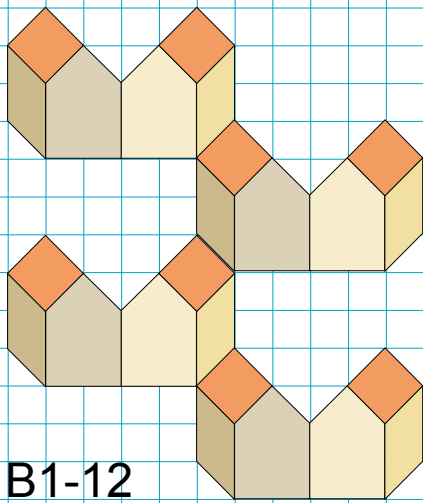
B1-9



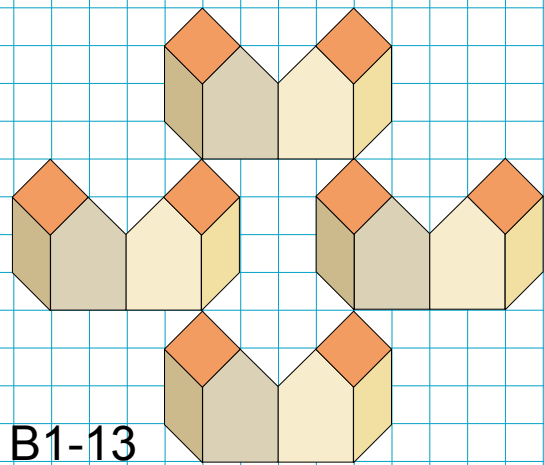
B1-10



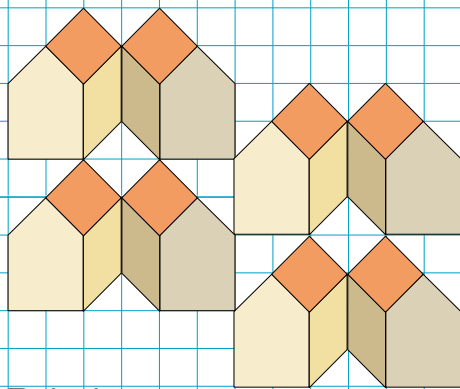
B1-11



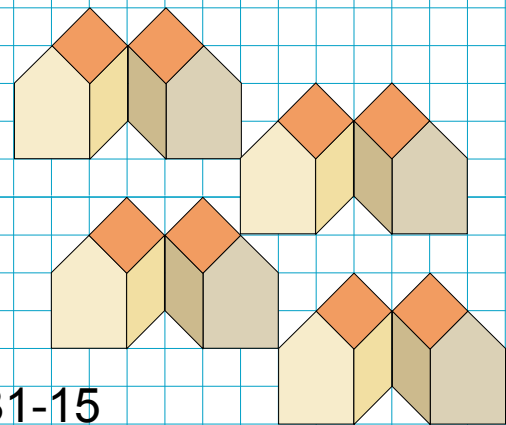
B1-12



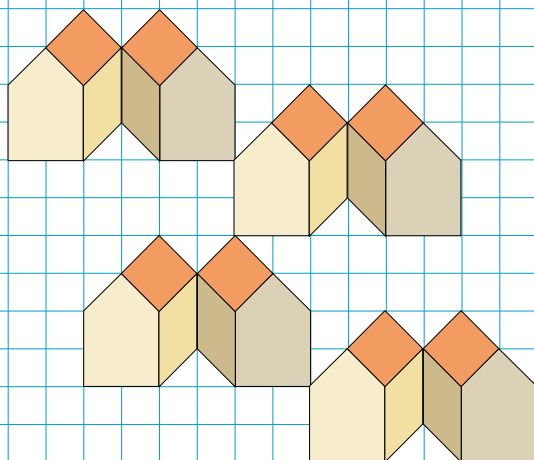
B1-13



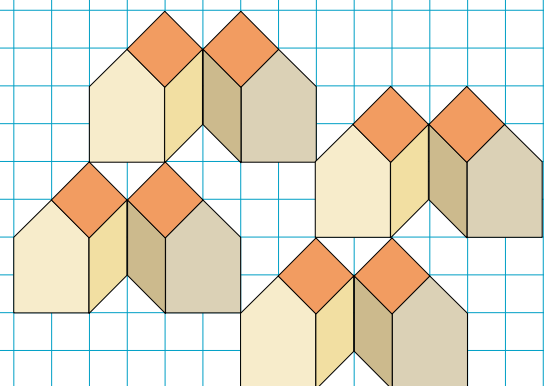
B1-14



B1-15

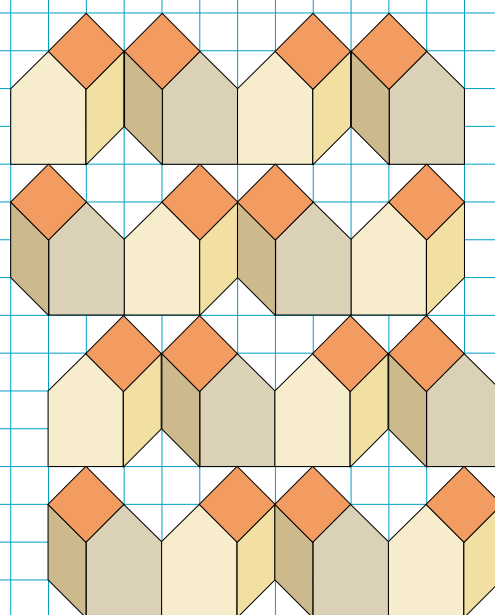
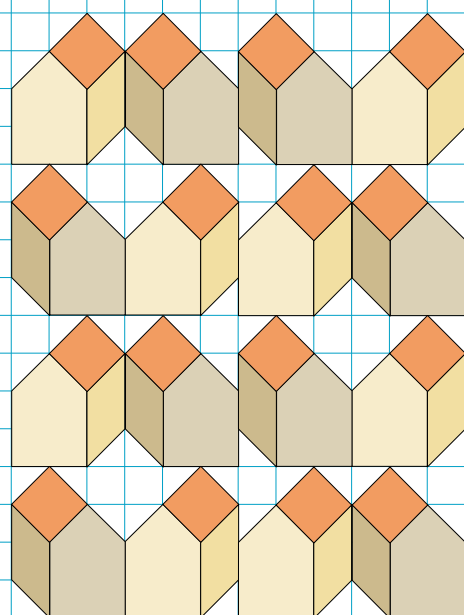
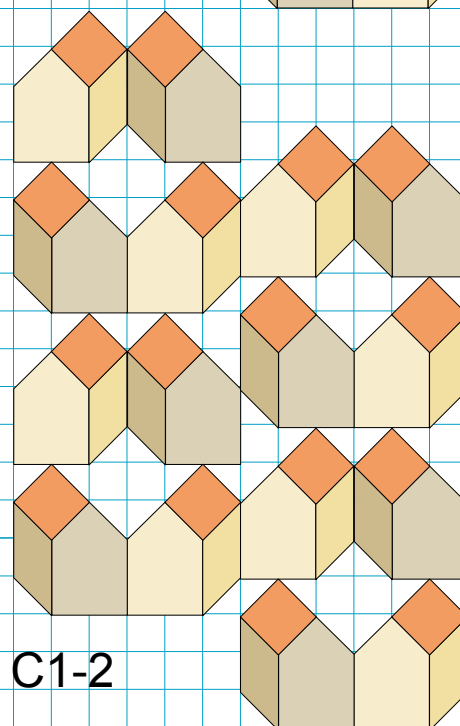
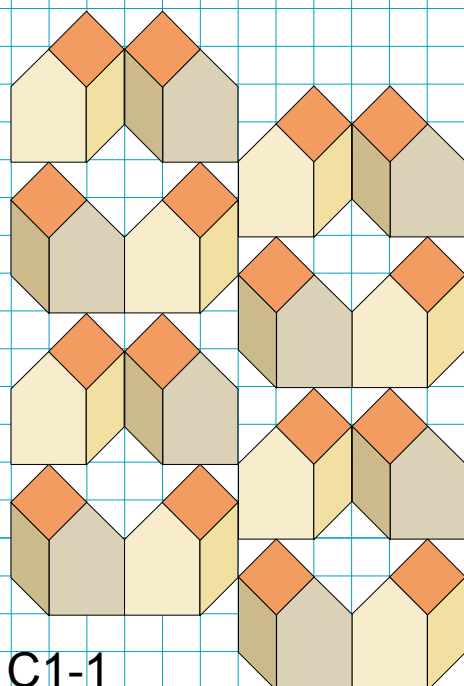
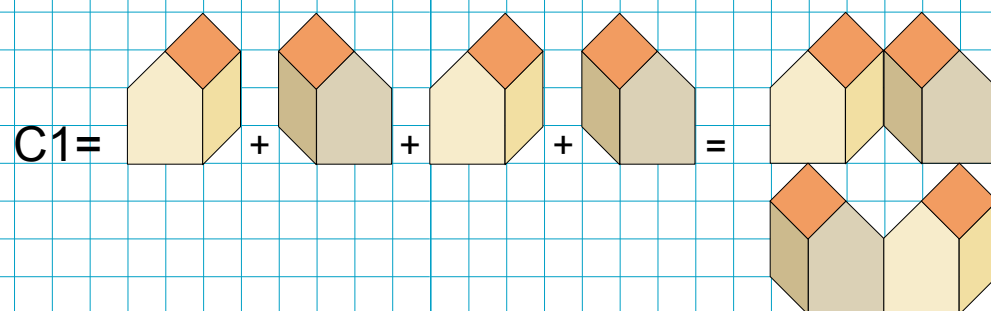


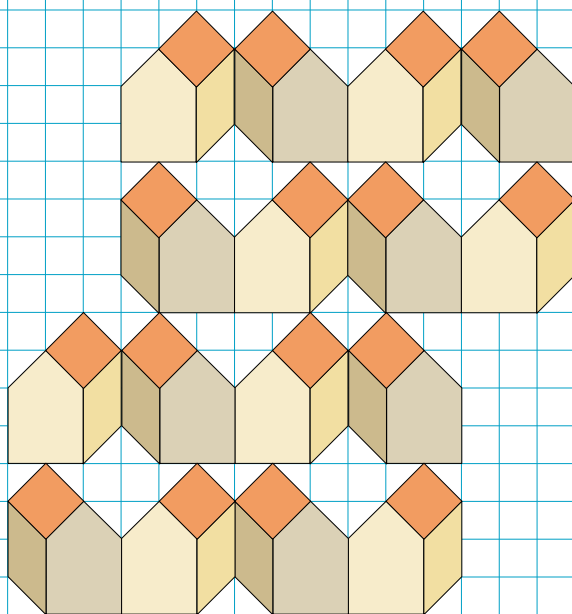
B1-16



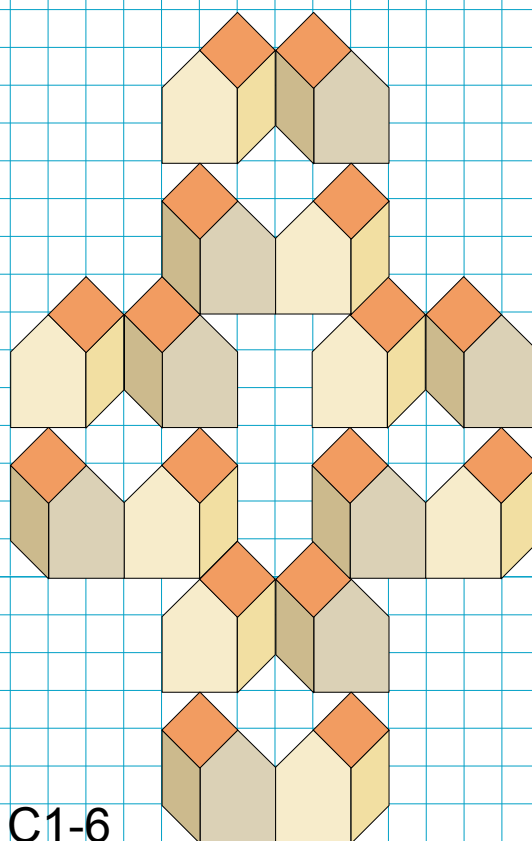
B1-17

C=MODULO COMPOSTO DA 4 MODULI BASE

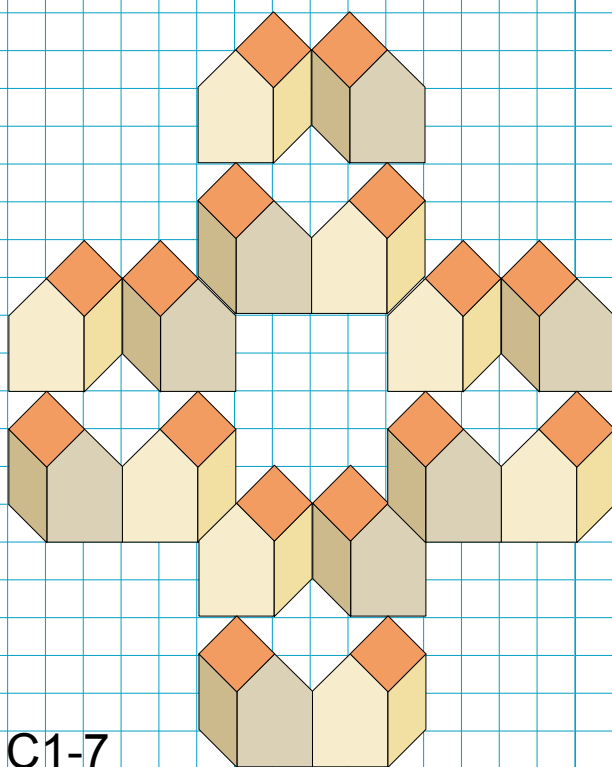




C1-5

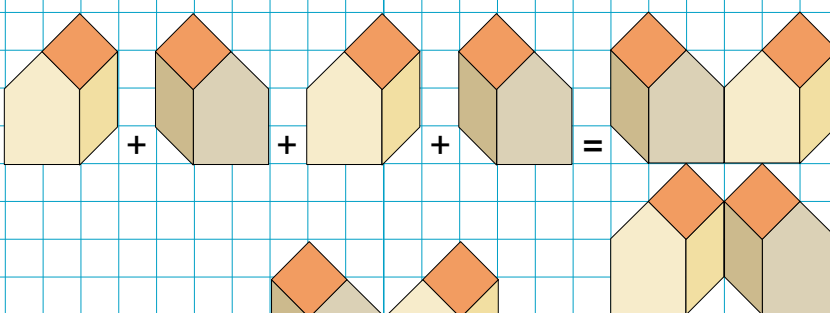


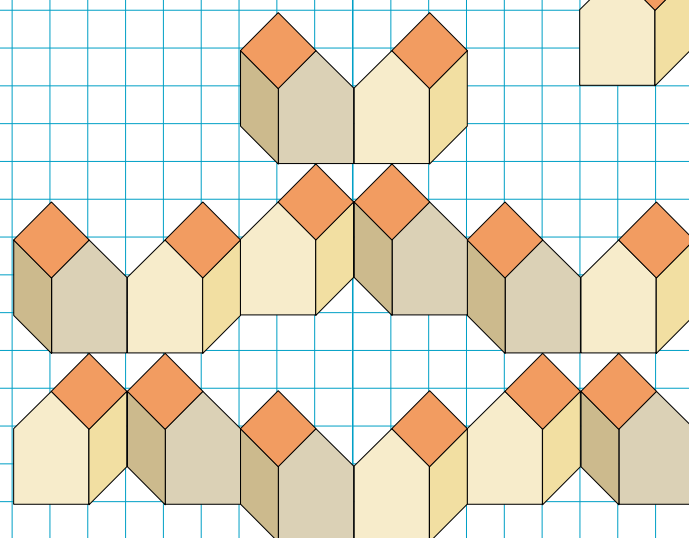
C1-6



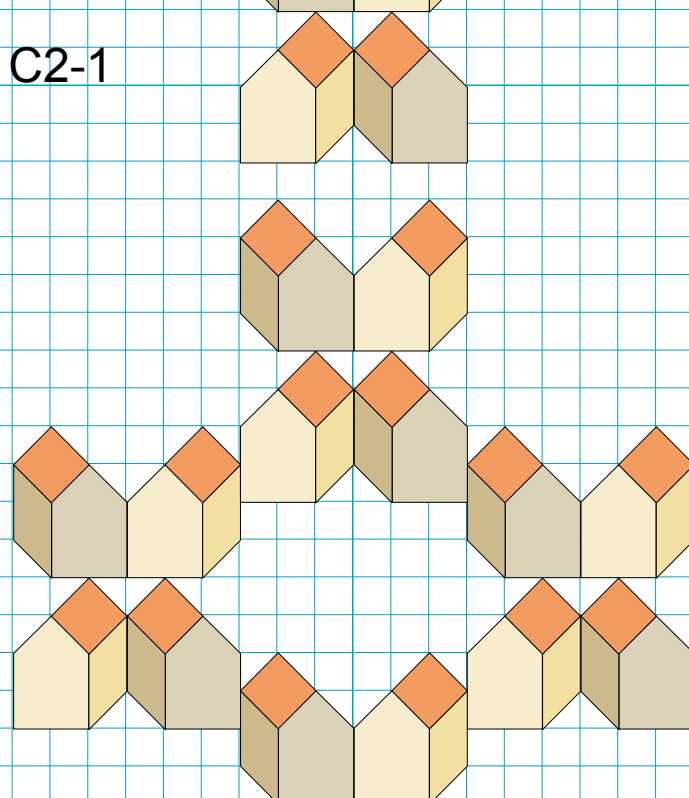
C1-7

C=MODULO COMPOSTO DA 4 MODULI BASE

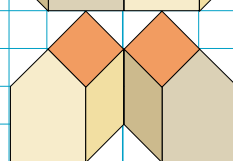
C1= 

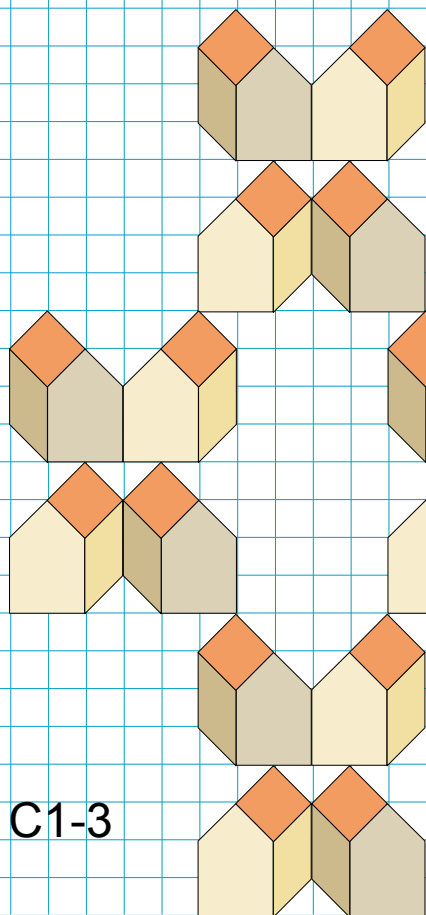


C2-1

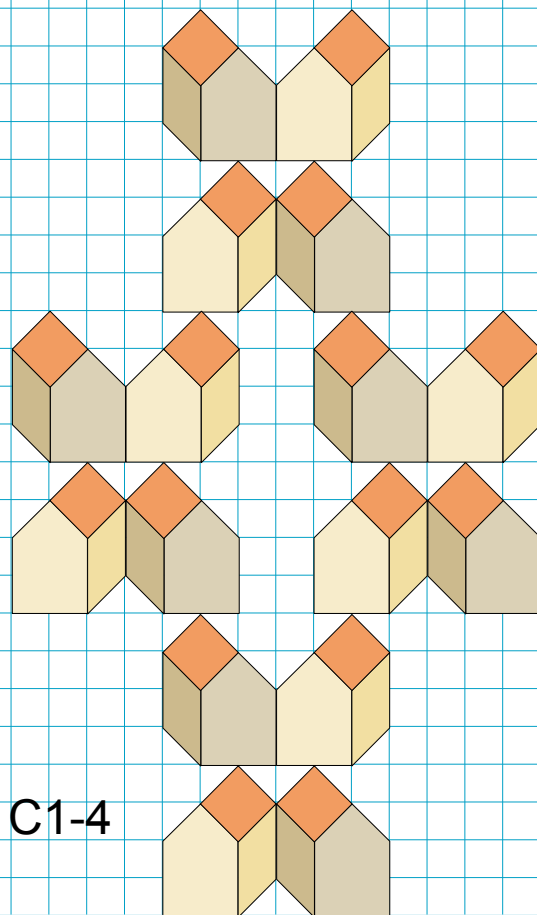


C2-2

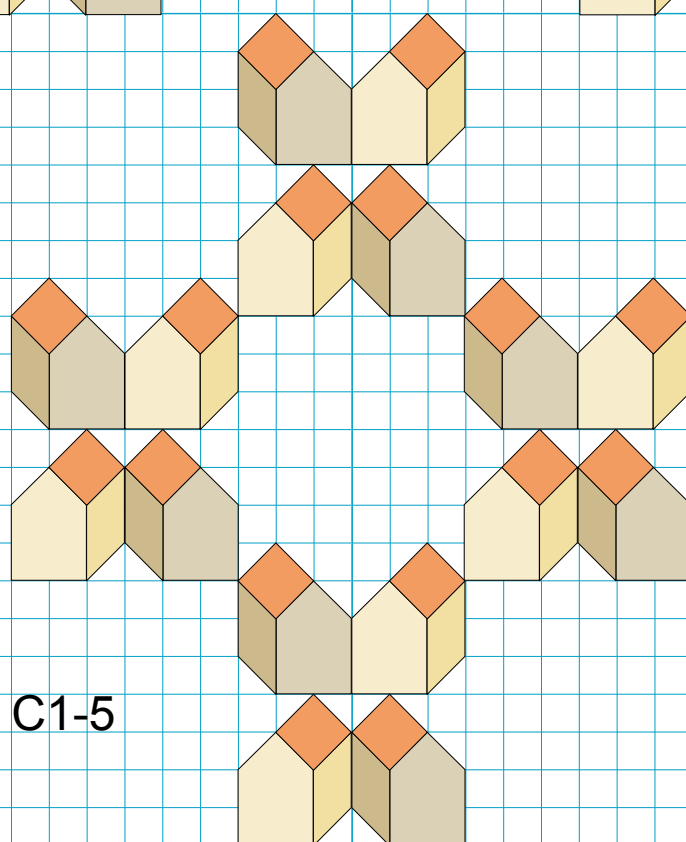




C1-3



C1-4



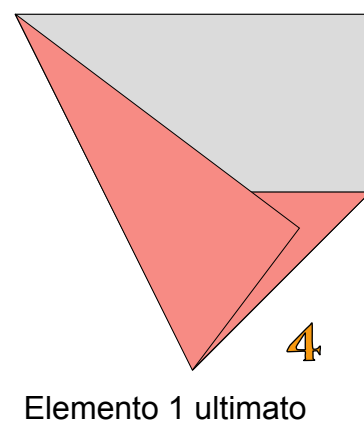
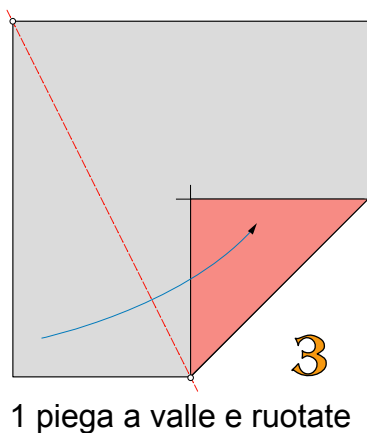
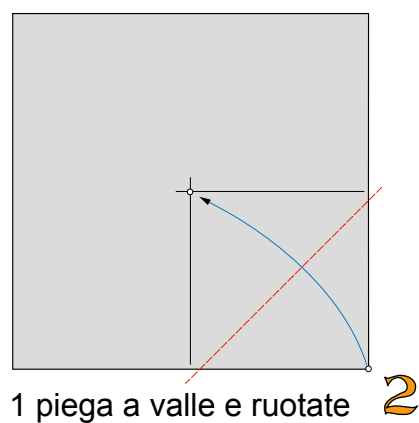
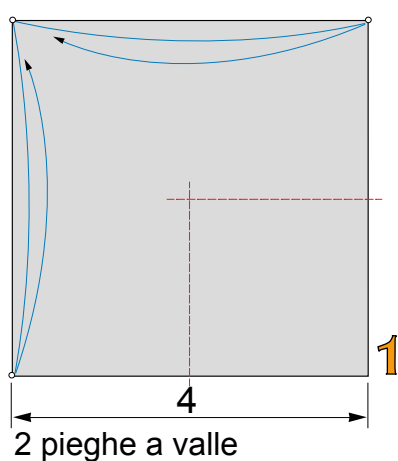
C1-5

MODULO "CUBO"

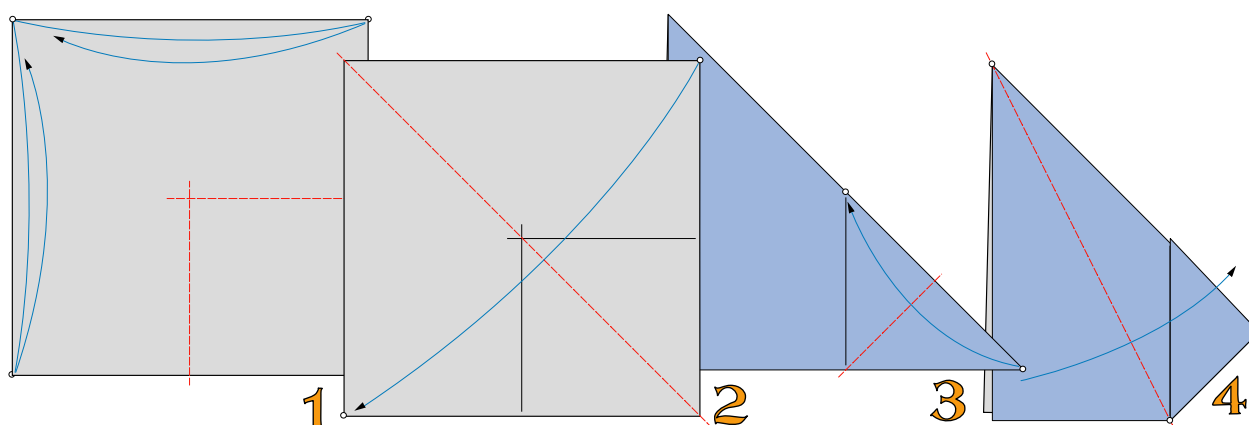
Per questo modulo ho eseguito aggregazioni di tipo A1, A2, A3, A4, C1, C2, C3, C4: moduli semplici, ruotati e composti.

Per la costruzione di questo modulo occorrono 3 fogli quadrati monocolori, di colore differente, di 4-8 cm di lato.

ELEMENTO 1



ELEMENTO 2



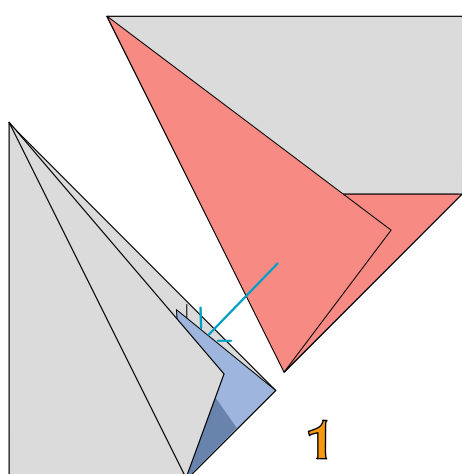
2 pieghe a valle

1 piega a valle e ruotate

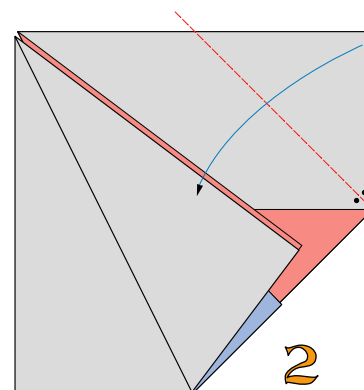
1 piega a valle e ruotate

1 piega a valle solo sulla sup. in vista e ruotate

UNIONE DEI 2 ELEMENTI



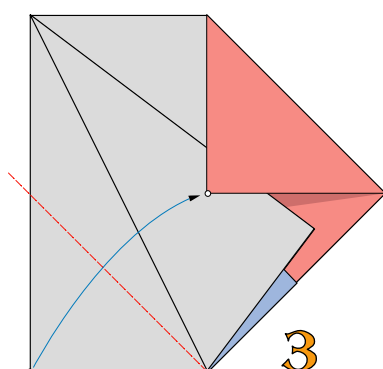
1



2

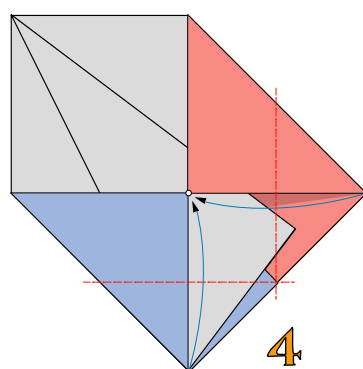
Intascate il modulo 1 nel modulo 2

1 piega bisettrice a valle e ruotate



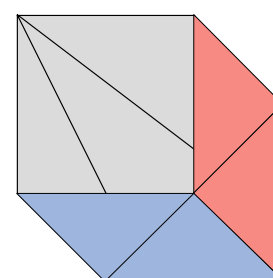
3

1 piega bisettrice a valle e ruotate



4

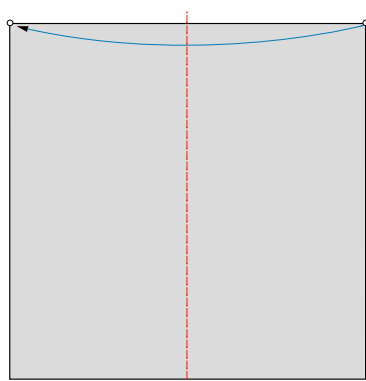
2 pieghe a valle e ruotate



5

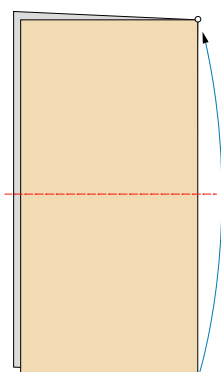
Elementi 1 e 2 uniti

ELEMENTO 3



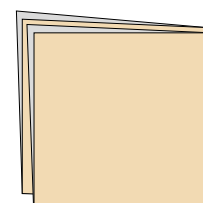
1

1 piega a valle e ruotate



2

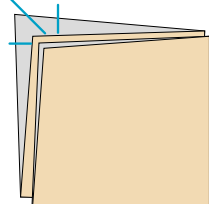
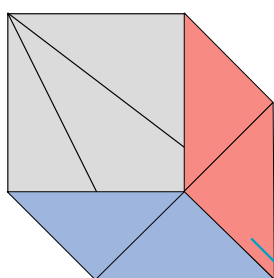
1 piega a valle e ruotate



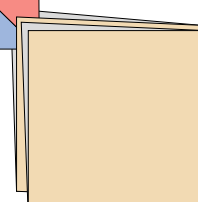
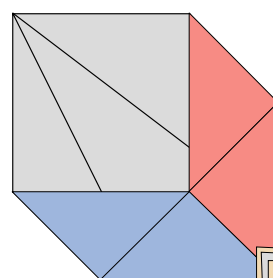
3

Elemento 3 ultimato

UNIONE DEI 3 ELEMENTI

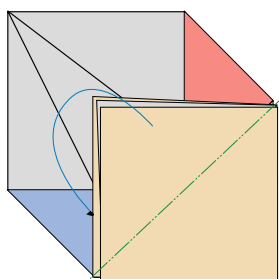


1



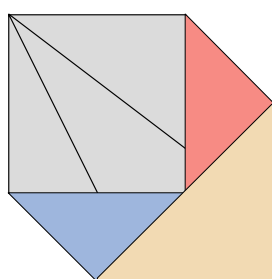
2

Intascate i moduli 1 e 2 nel modulo 3



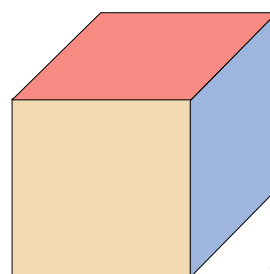
3

Mediante una piega a monte
intascate 3 vertici del modulo
3 bloccando l'unione



4

Modulo Cubo 2D ultimato

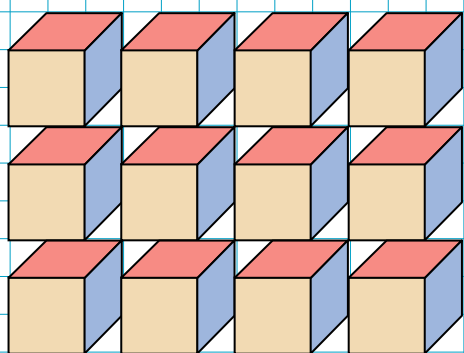


5

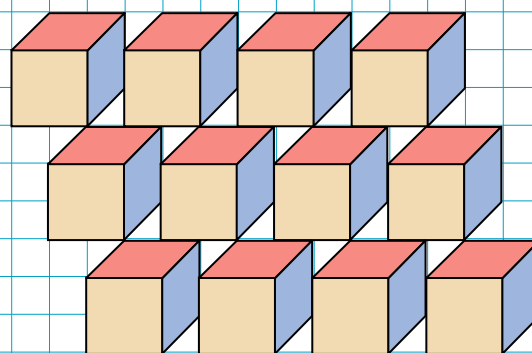
CUBO - COMPOSIZIONI MODULARI

A= UNIONE MODULI BASE

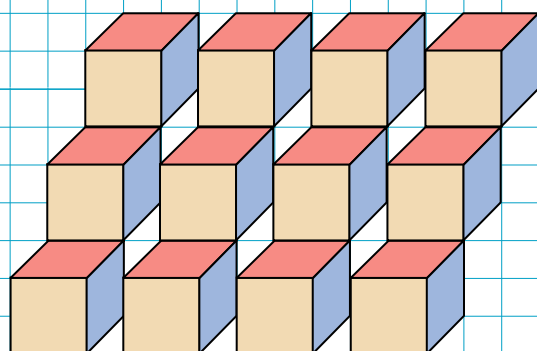
$$A1 = \text{cube} + \text{cube}$$



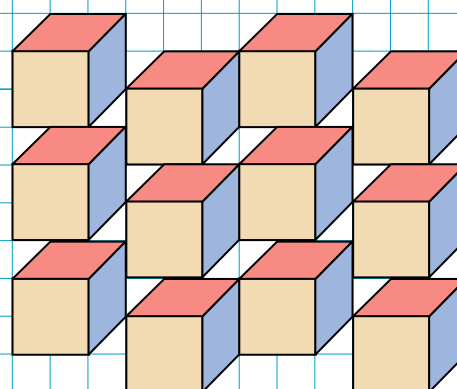
A1-1



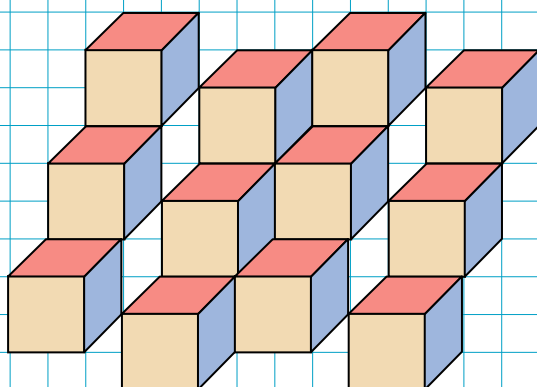
A1-2



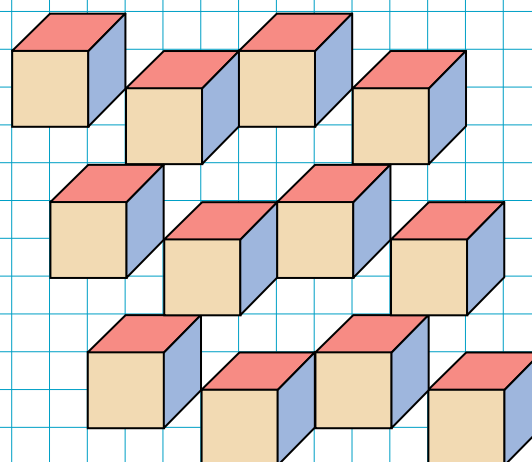
A1-3



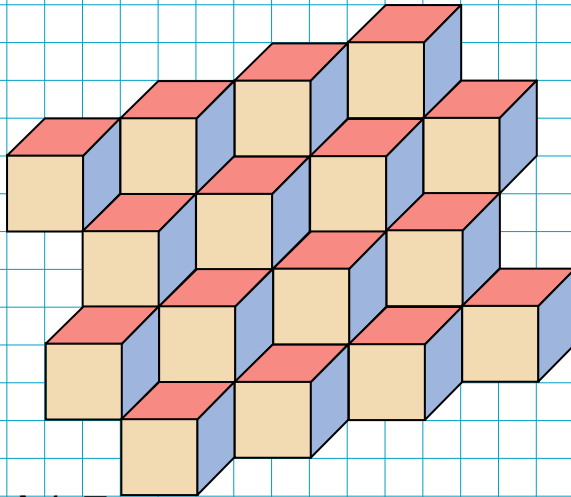
A1-4



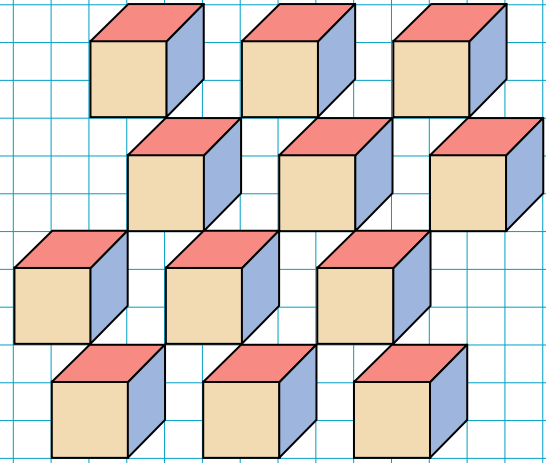
A1-5



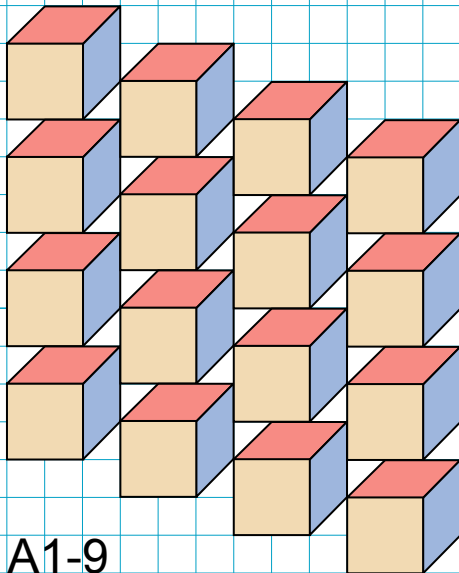
A1-6



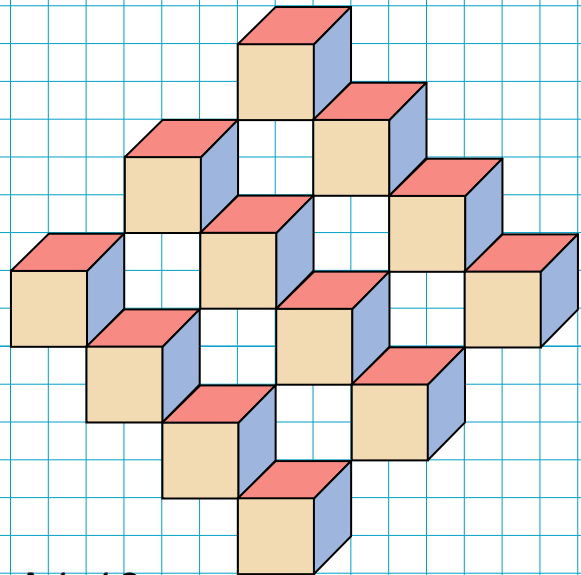
A1-7



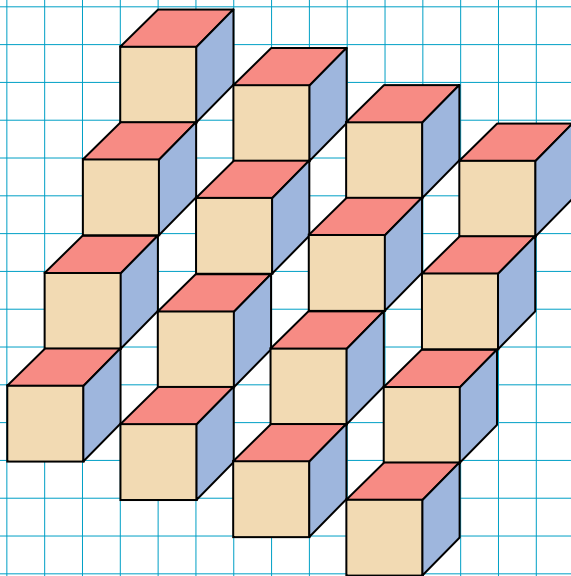
A1-8



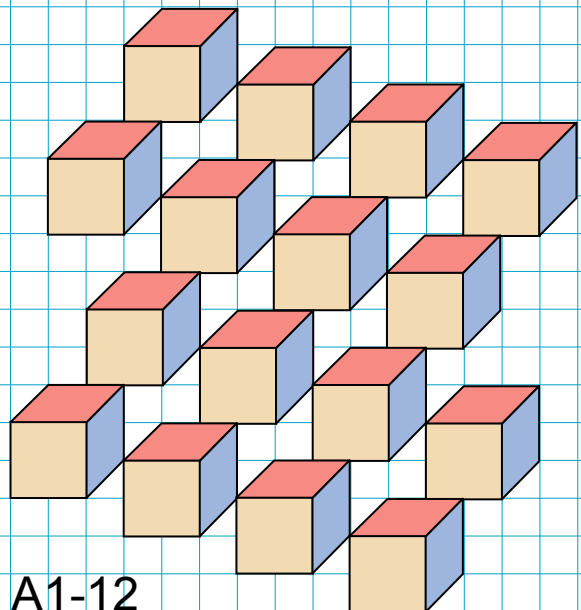
A1-9



A1-10

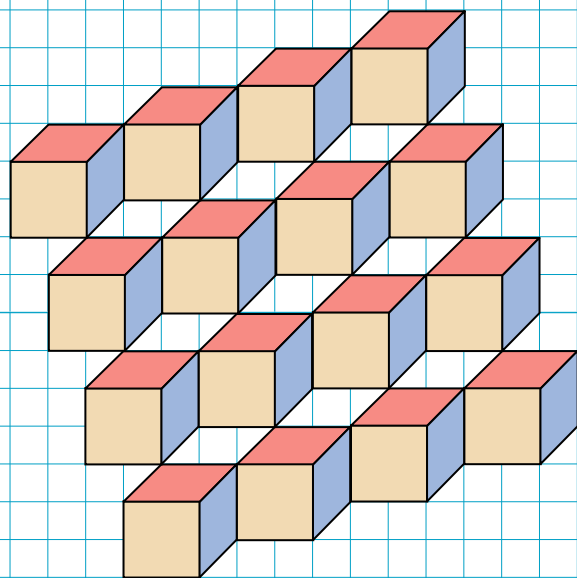
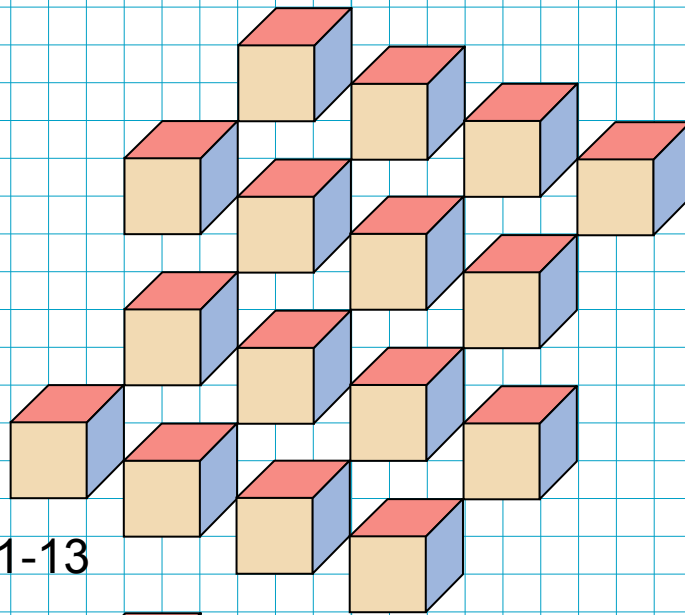


A1-11

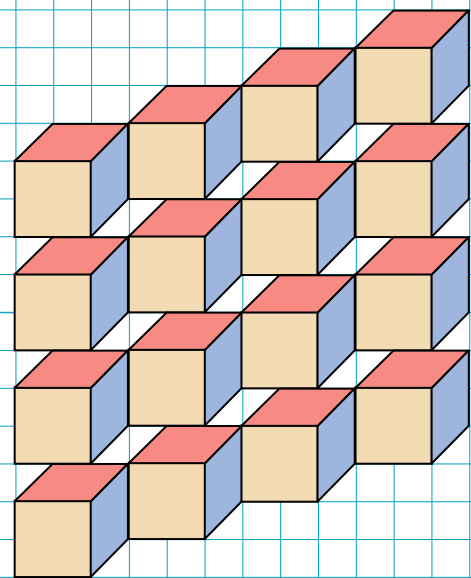


A1-12

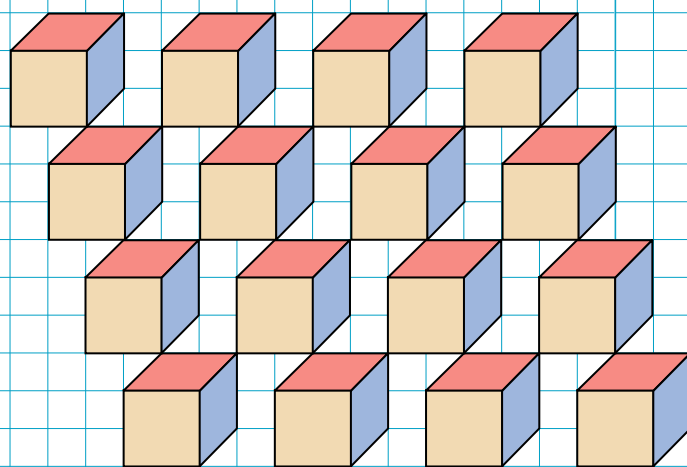
A1-13



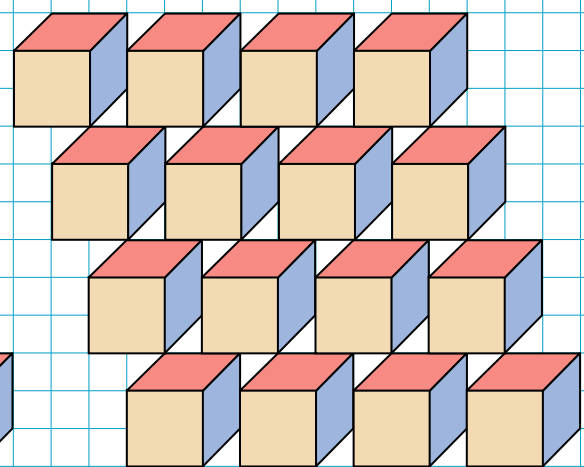
A1-14



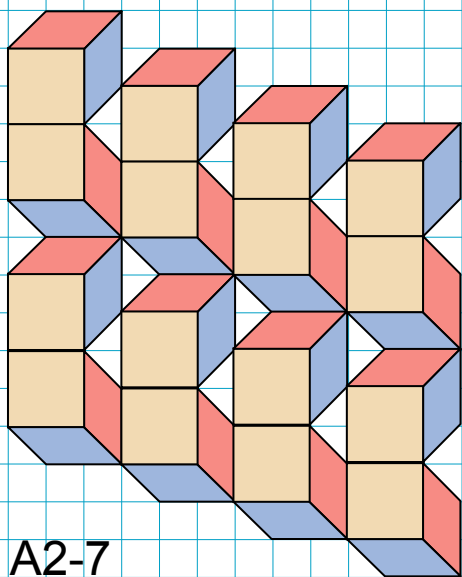
A1-15



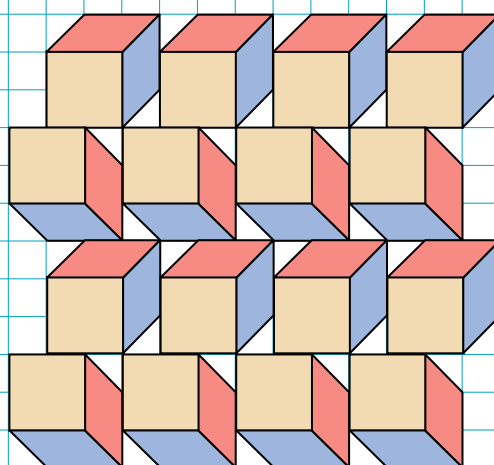
A1-16



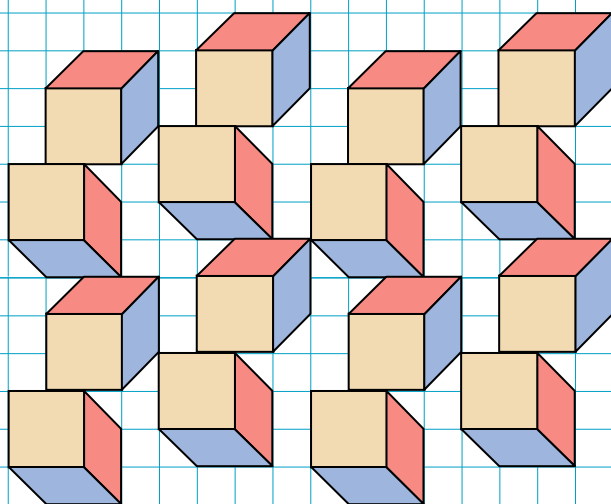
A1-17



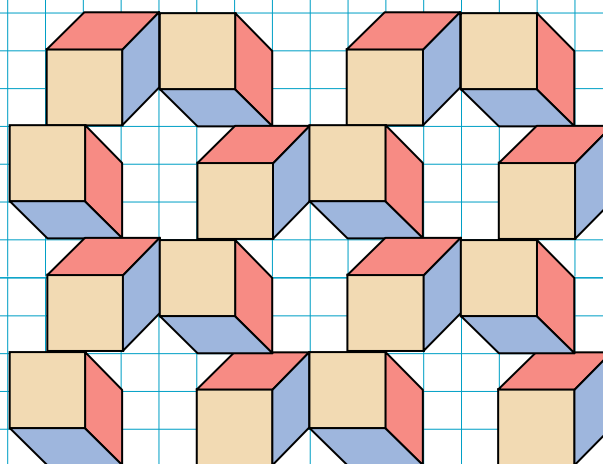
A2-7



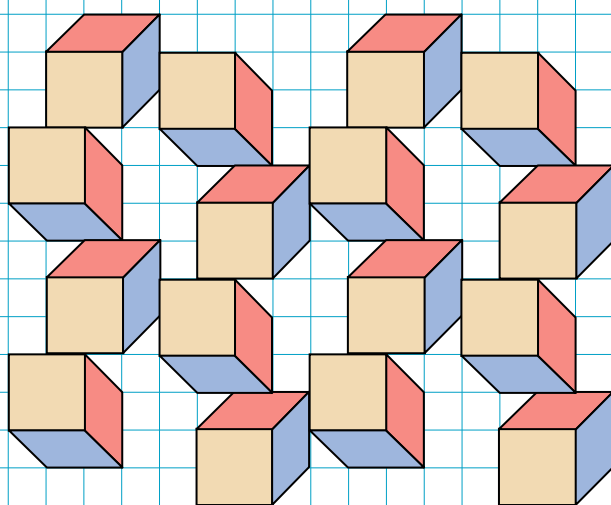
A2-8



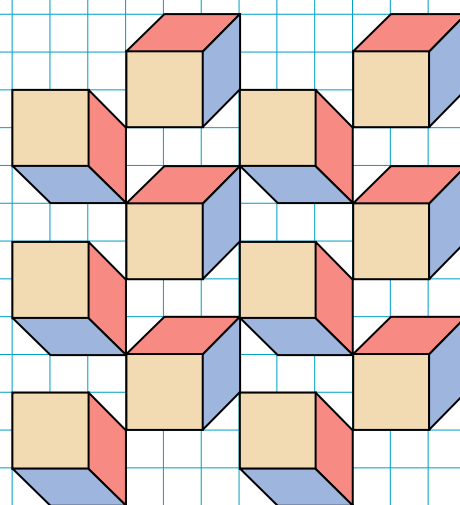
A2-9



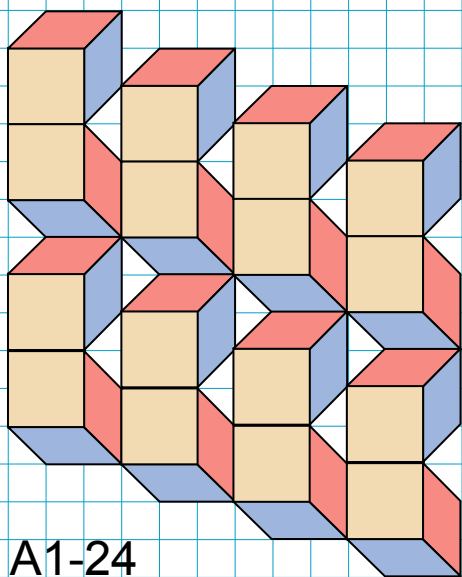
A2-10



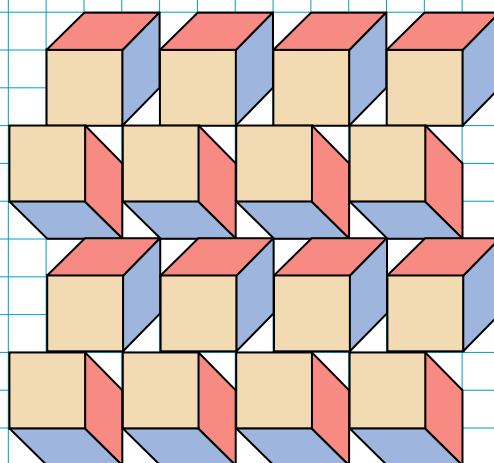
A2-11



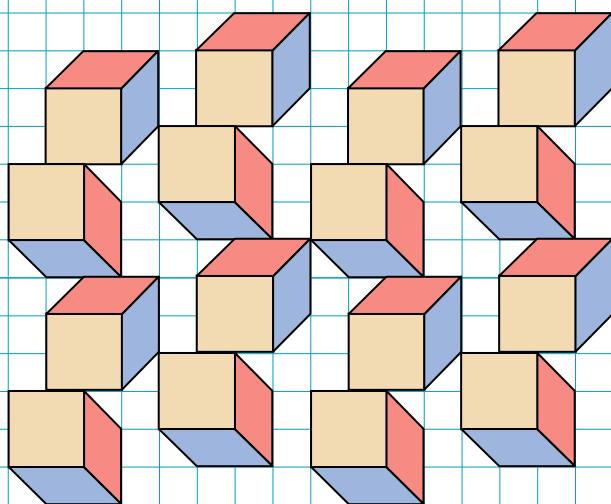
A2-12



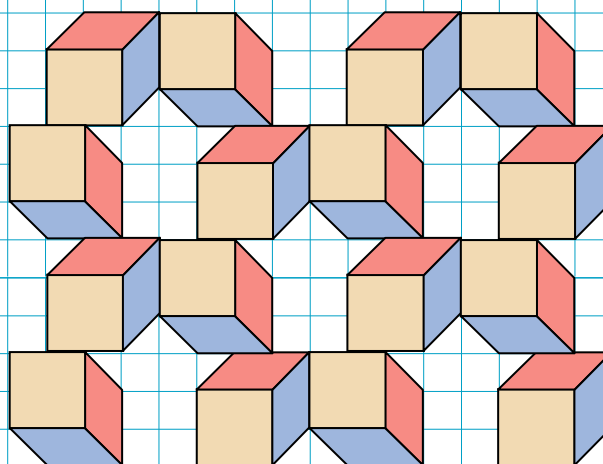
A1-24



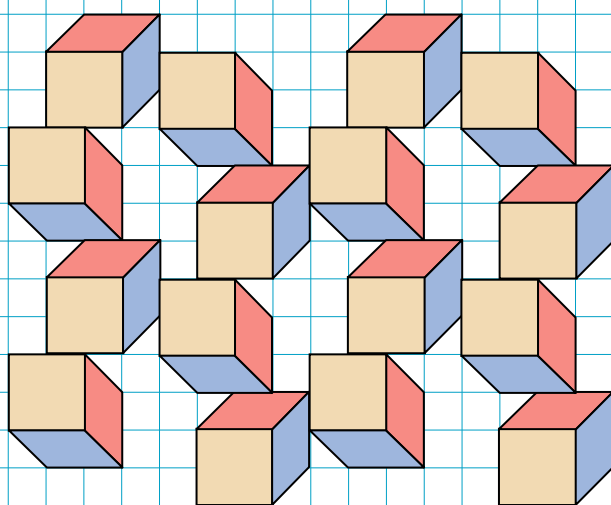
A1-25



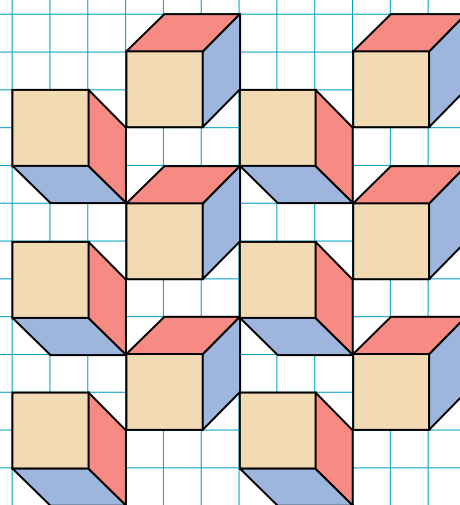
A1-26



A1-27

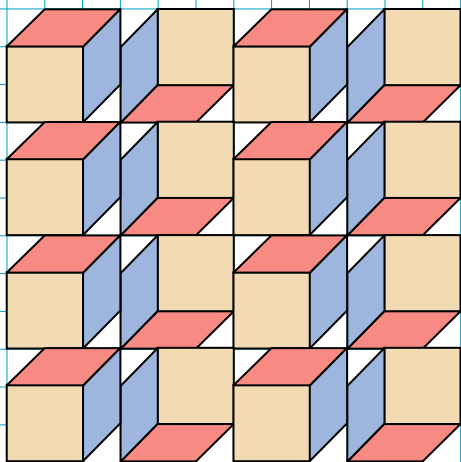


A1-28

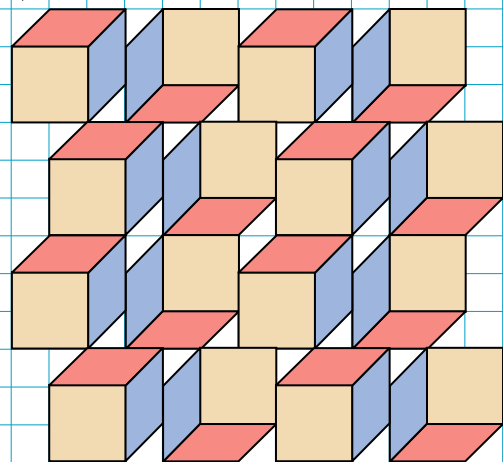


A1-29

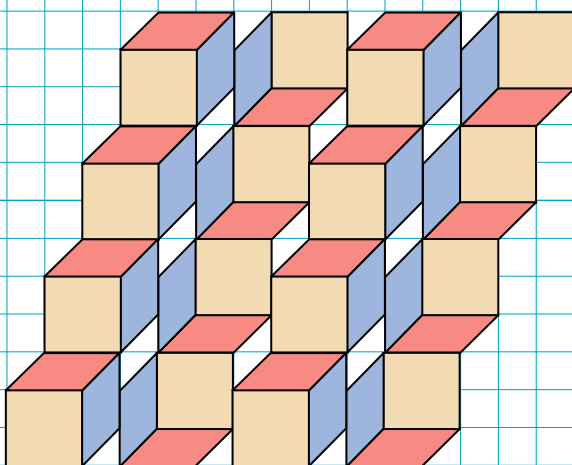
$$A3 = \text{cube} + \text{corner}$$



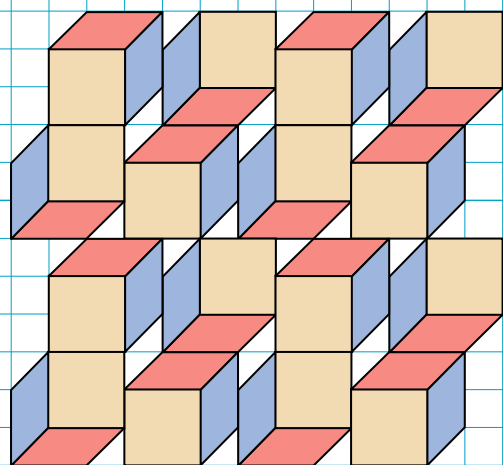
A3-1



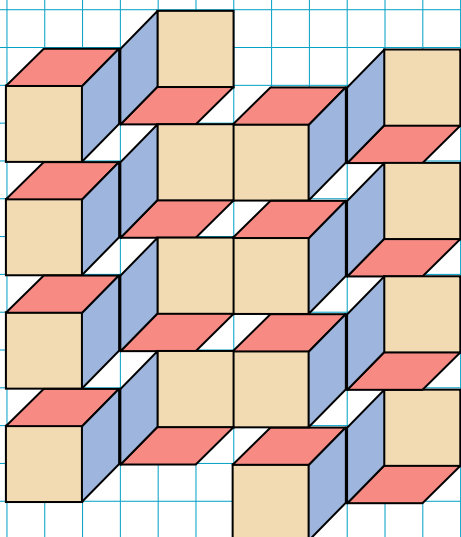
A3-2



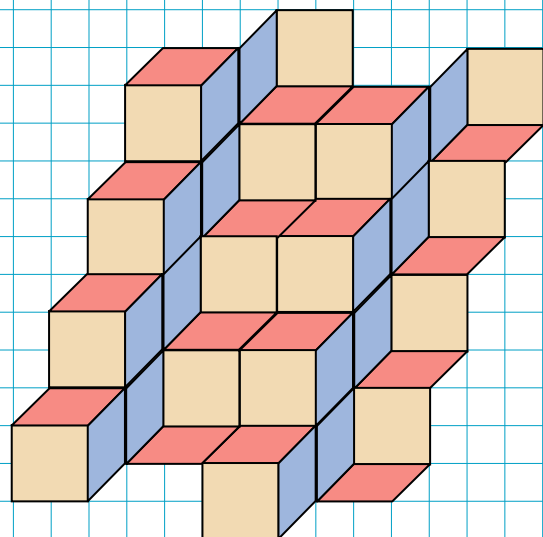
A3-3



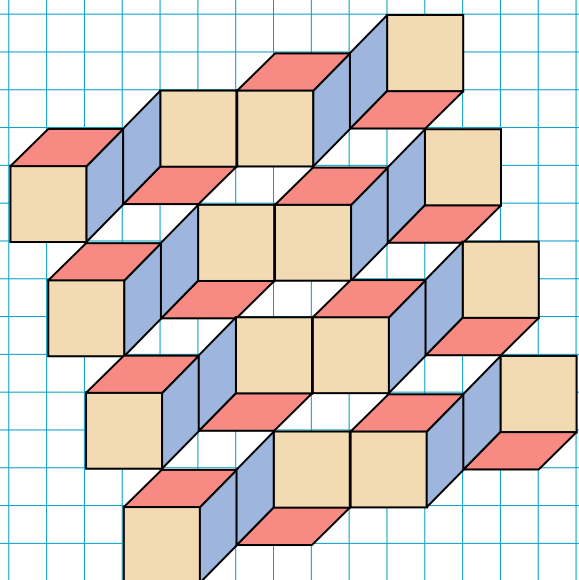
A3-4



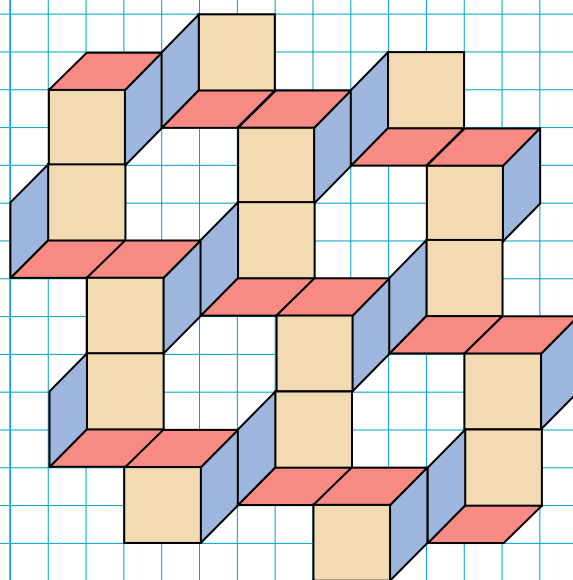
A3-5



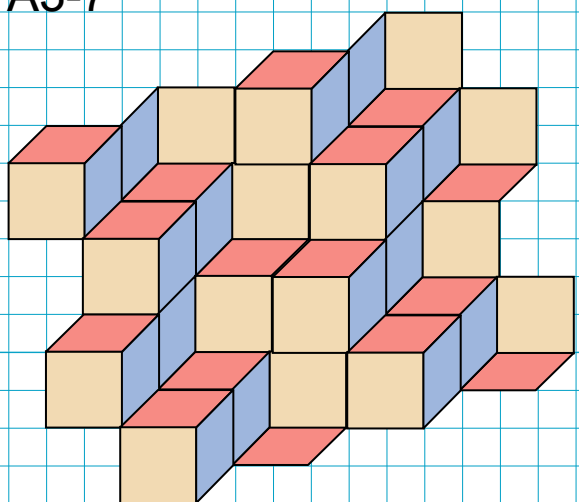
A3-6



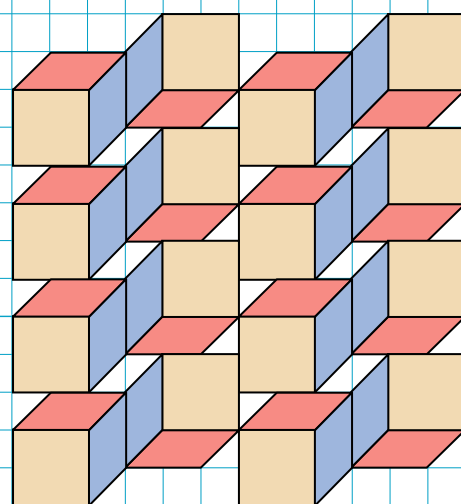
A3-7



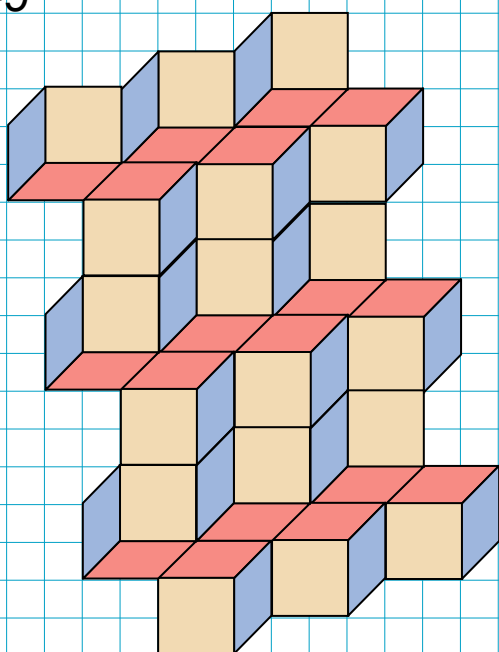
A3-8



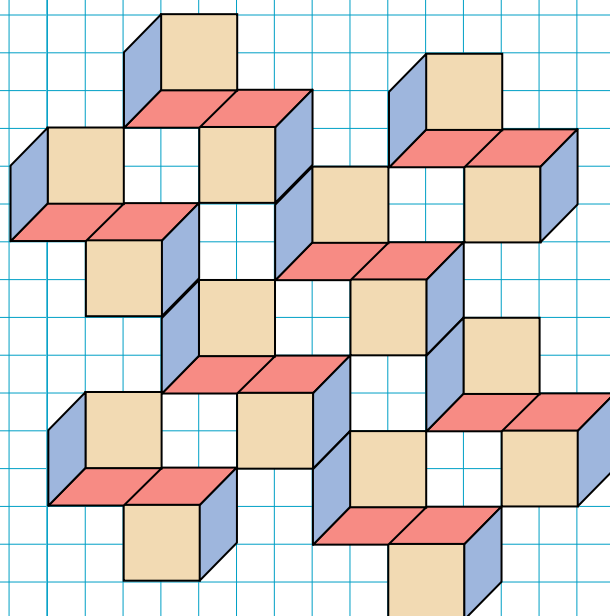
A3-9



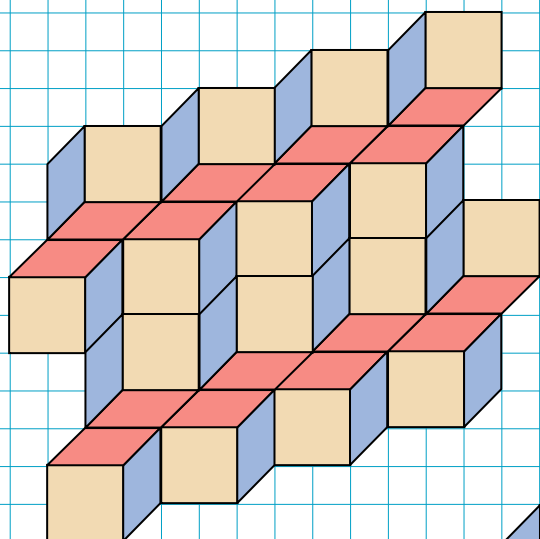
A3-10



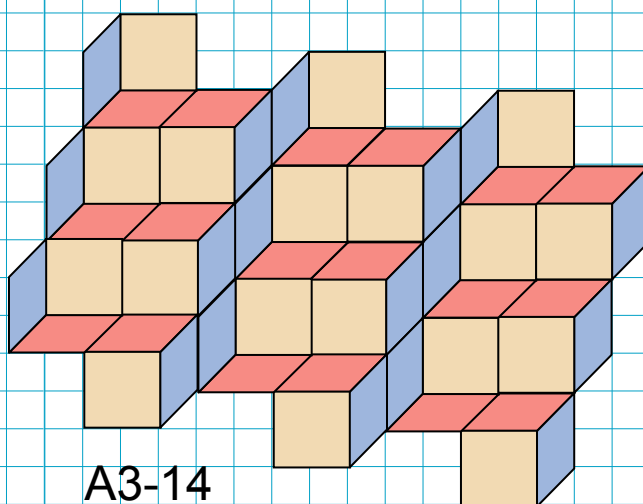
A3-11



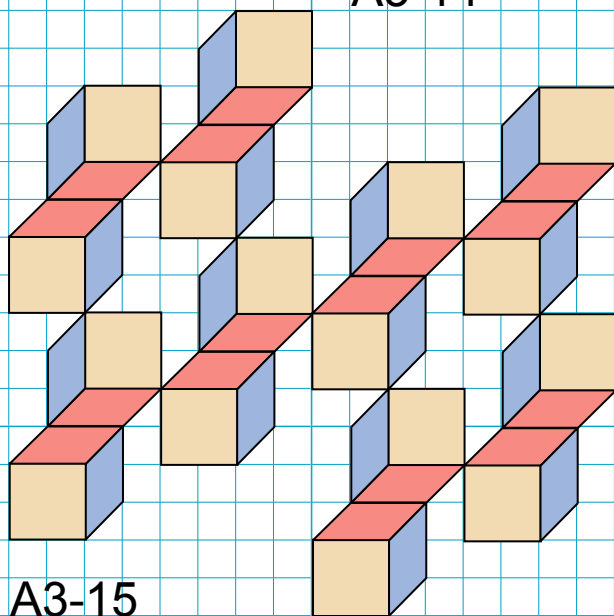
A3-12



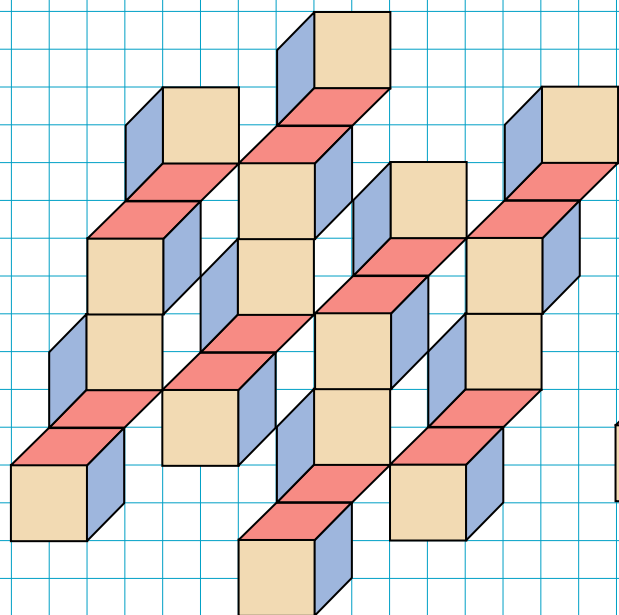
A3-13



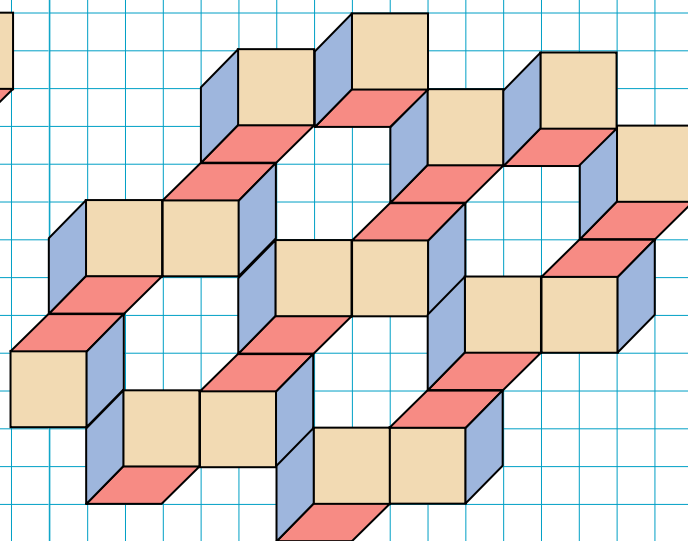
A3-14



A3-15

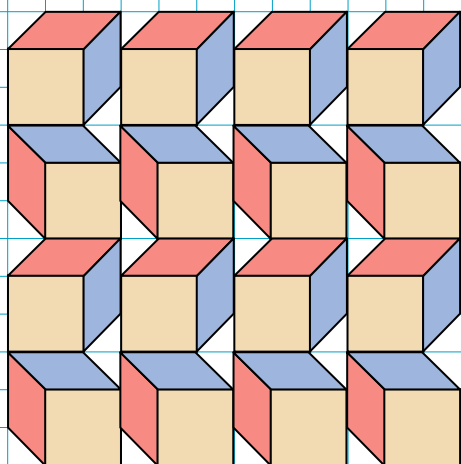


A3-16

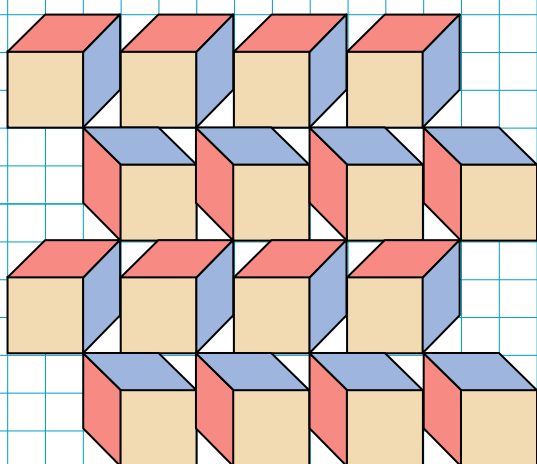


A3-17

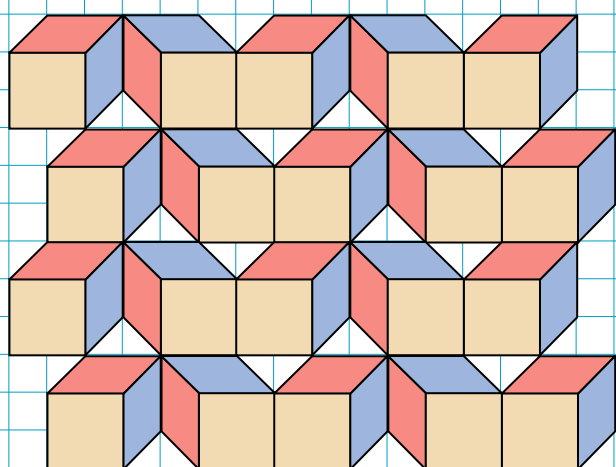
$$A4 = \text{cube} + \text{cube}$$



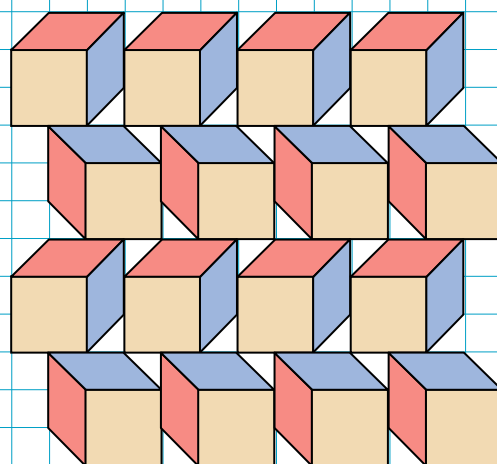
A4-1



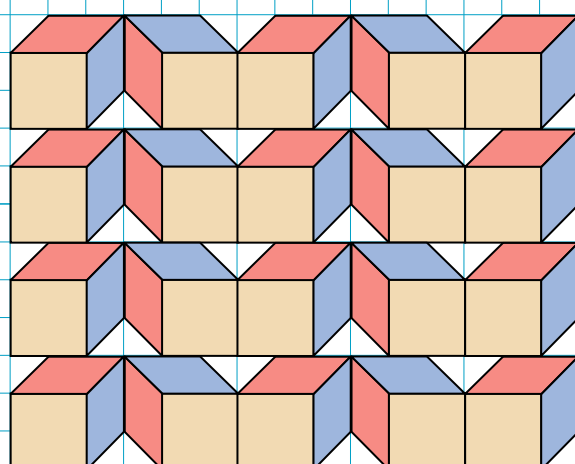
A4-3



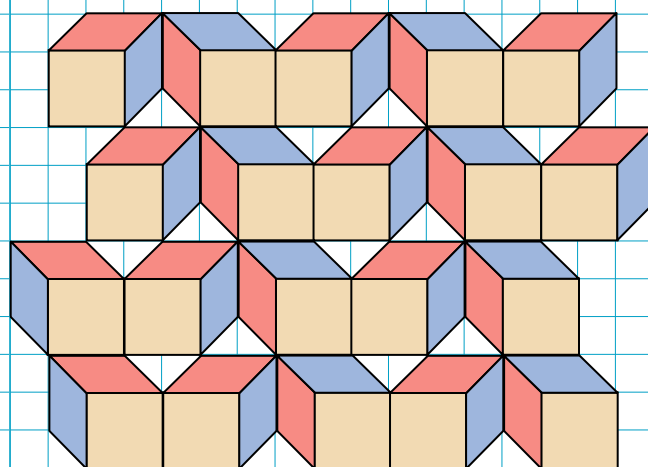
A4-5



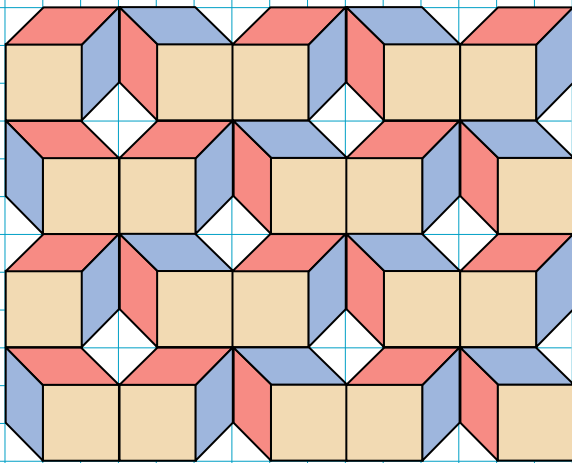
A4-2



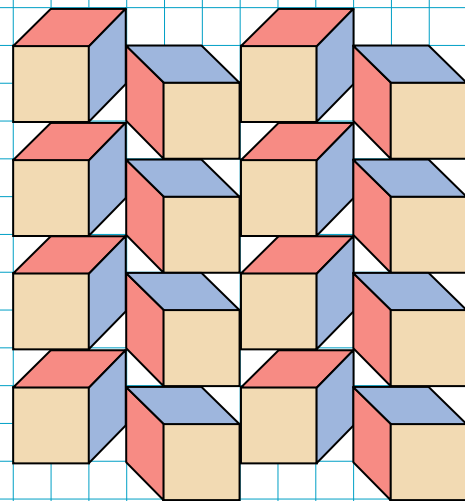
A4-4



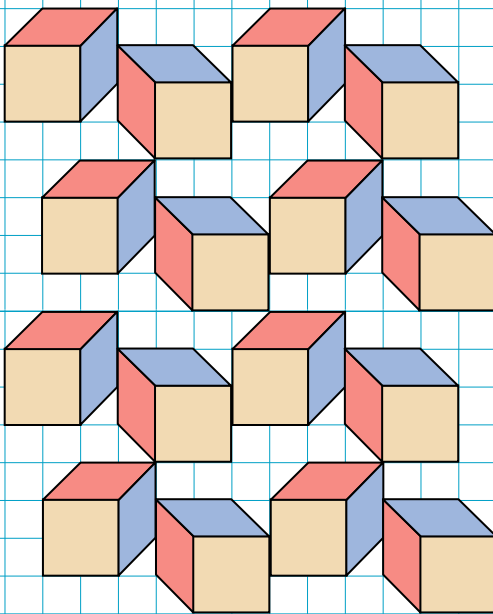
A3-6



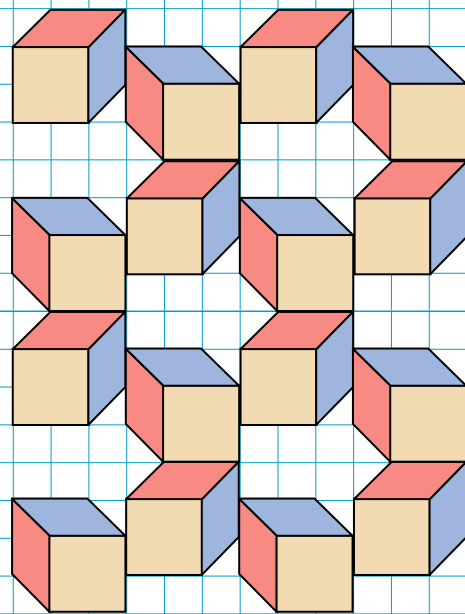
A4-7



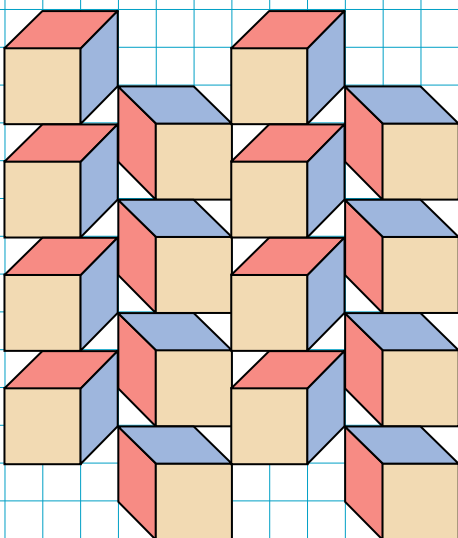
A4-8



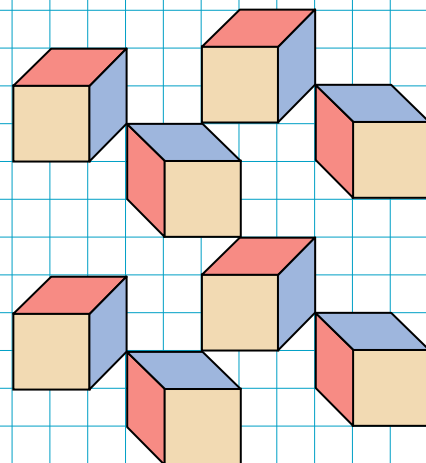
A4-9



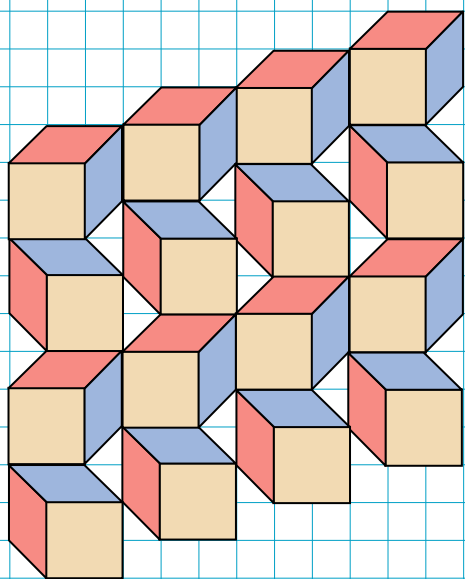
A4-10



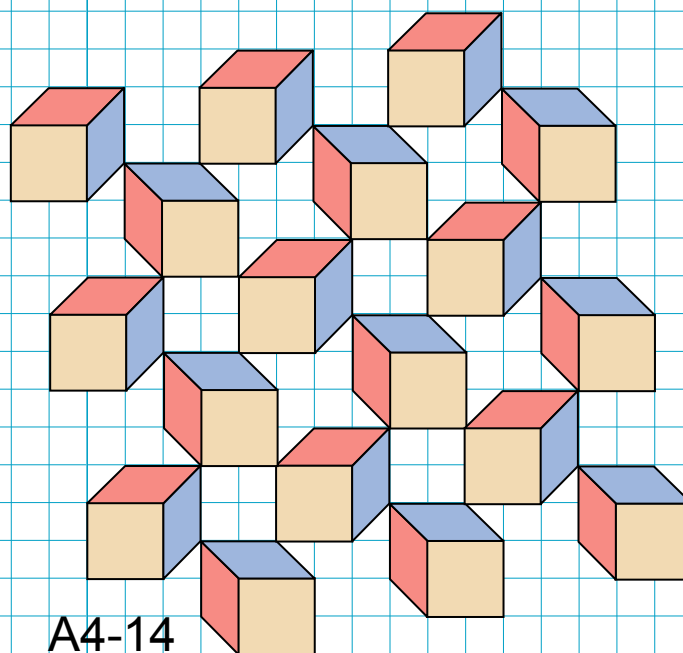
A4-11



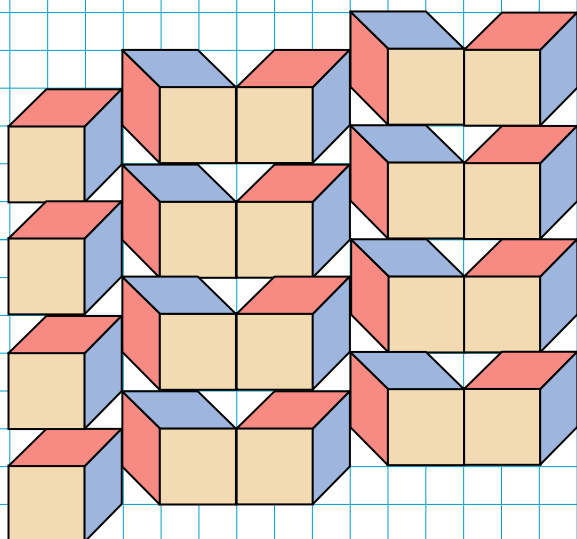
A4-12



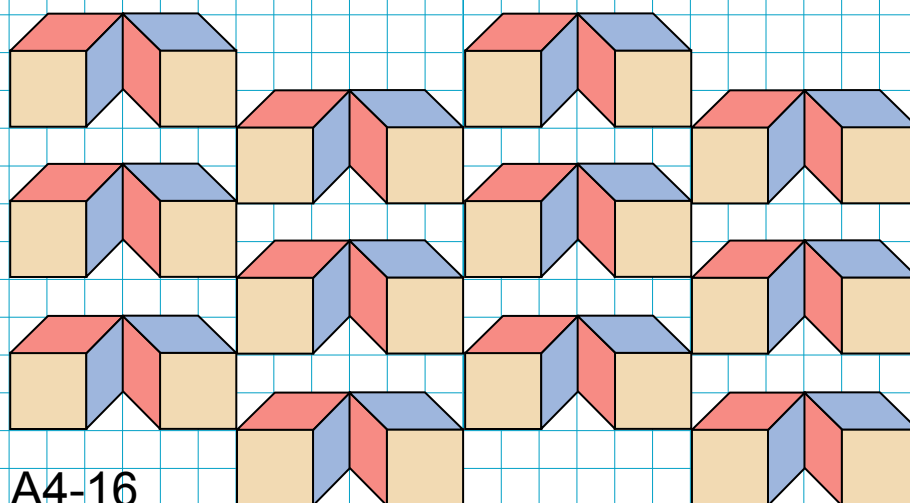
A4-13



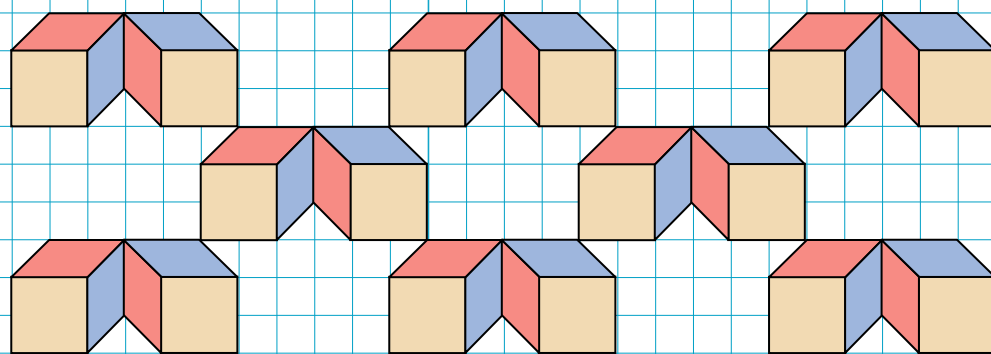
A4-14



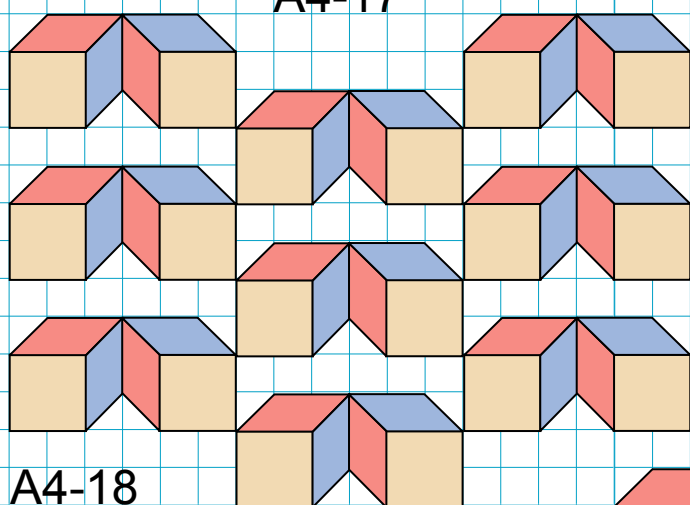
A4-15



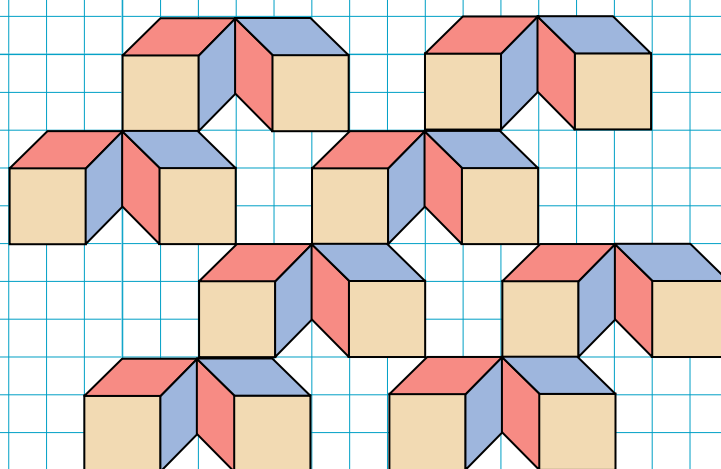
A4-16



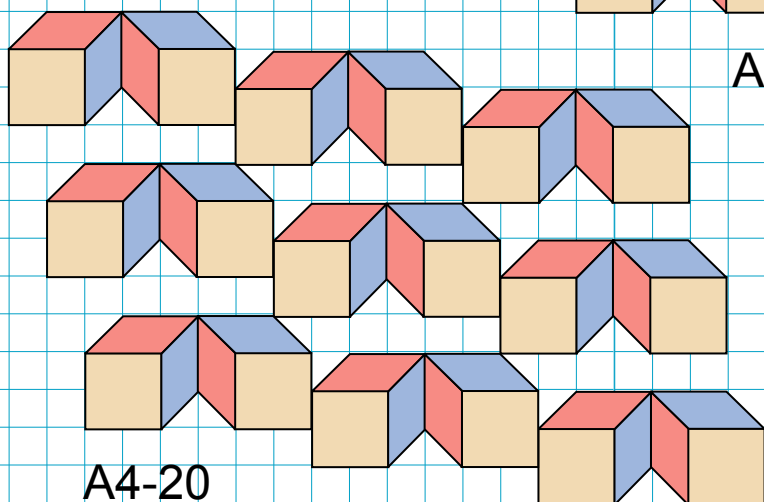
A4-17



A4-18

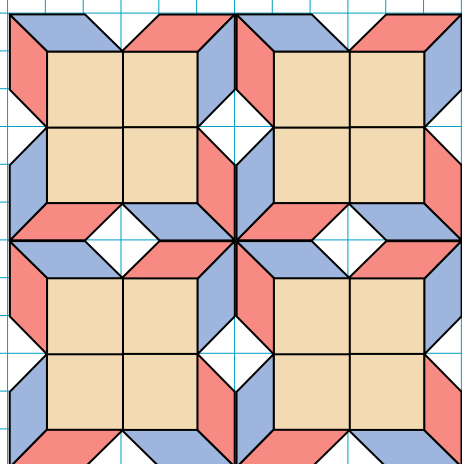
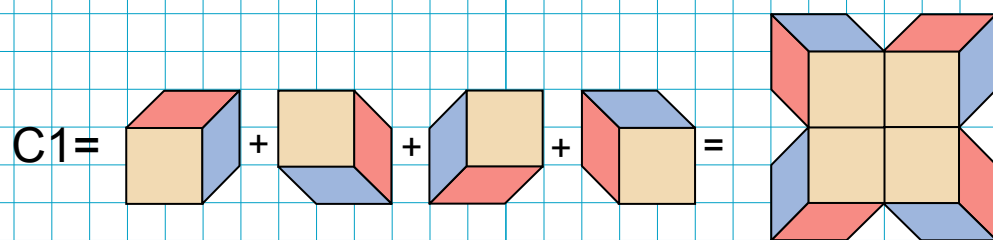


A4-19

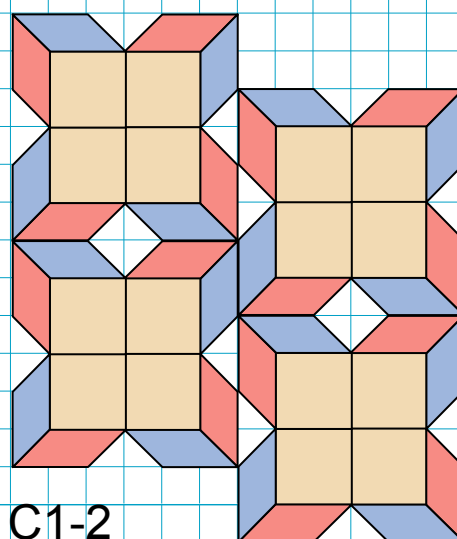


A4-20

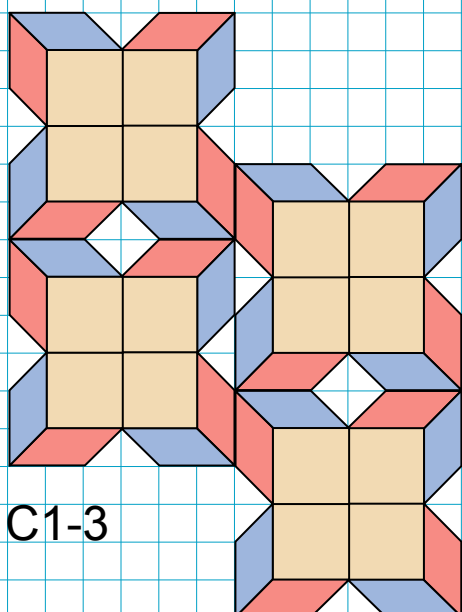
C=MODULO COMPOSTO DA 4 MODULI BASE



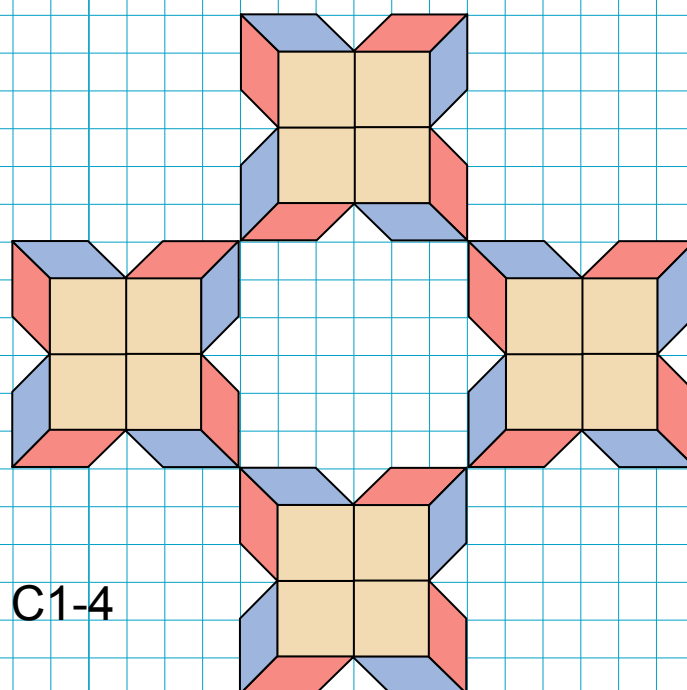
C1-1



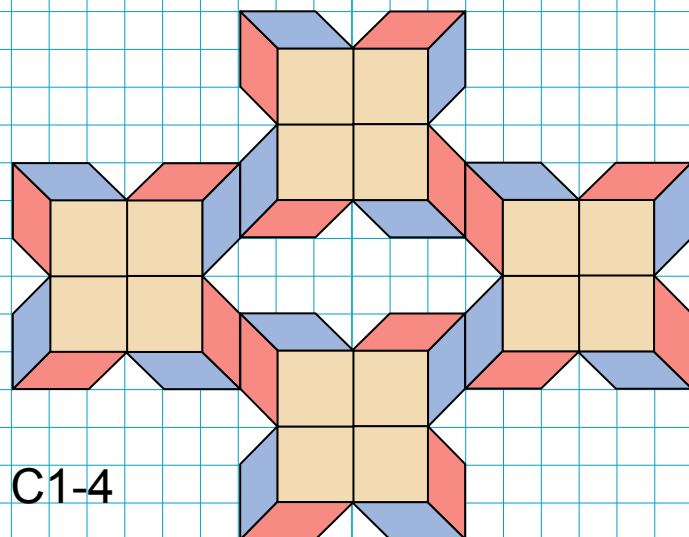
C1-2



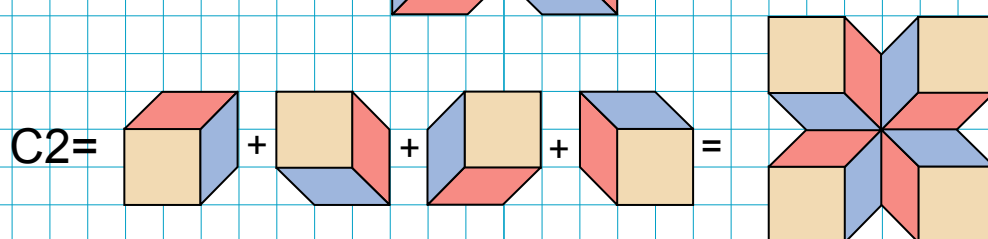
C1-3



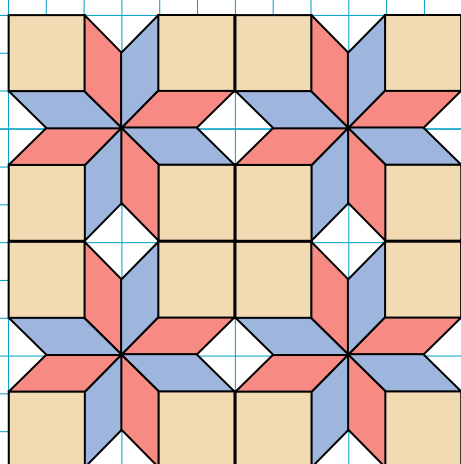
C1-4



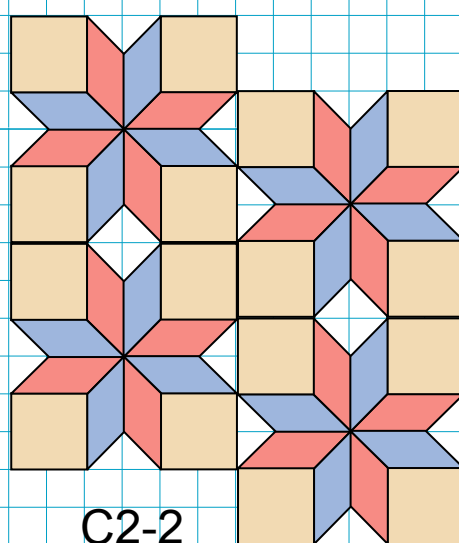
C1-4



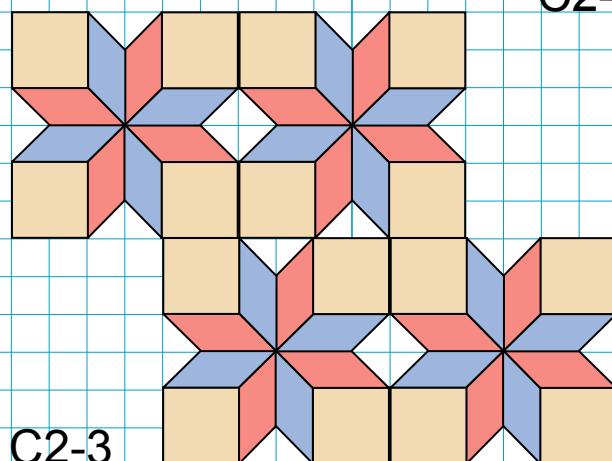
C2=



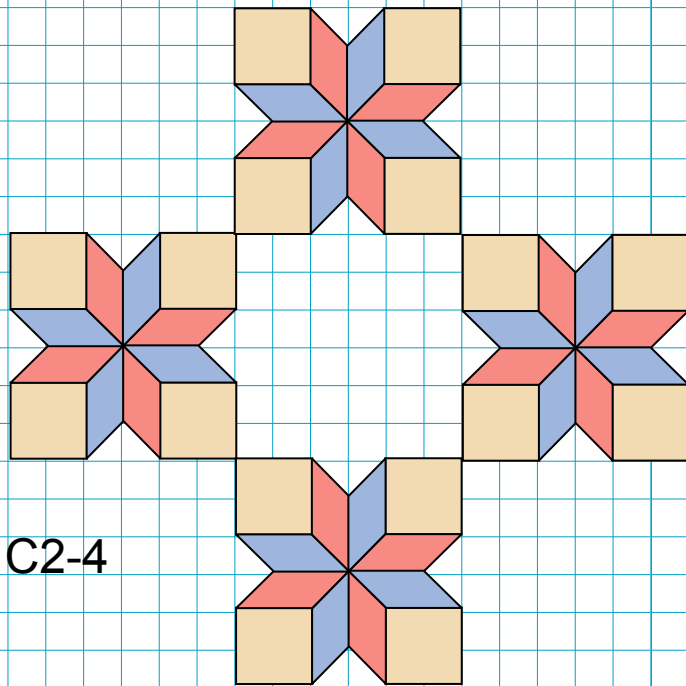
C2-1



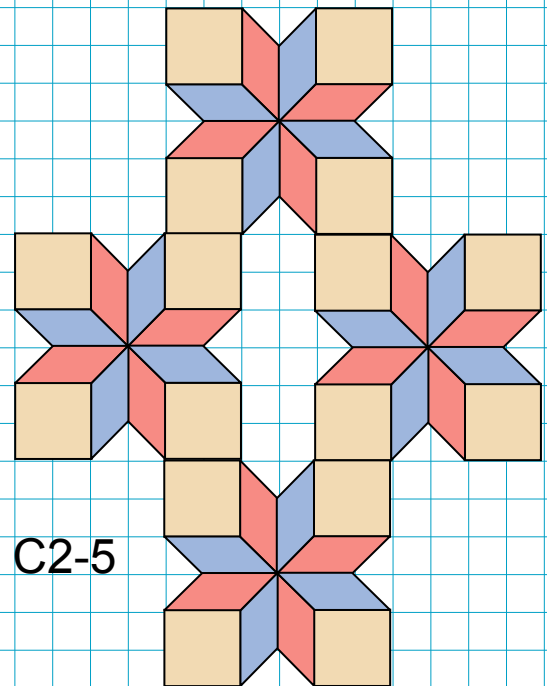
C2-2



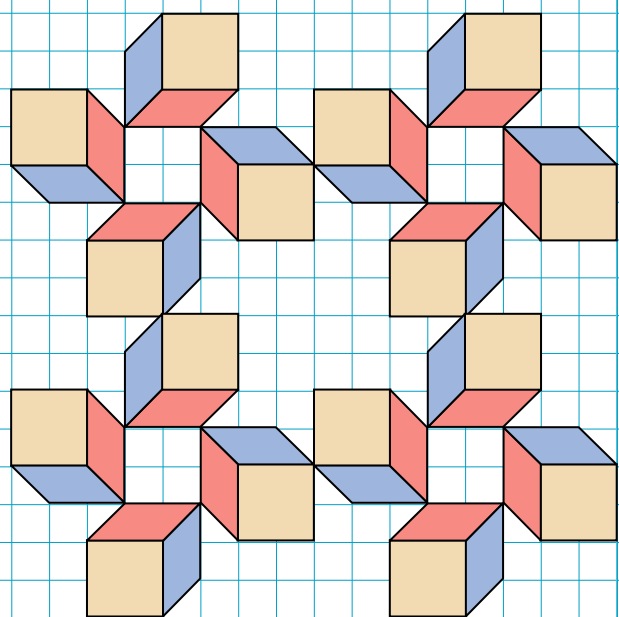
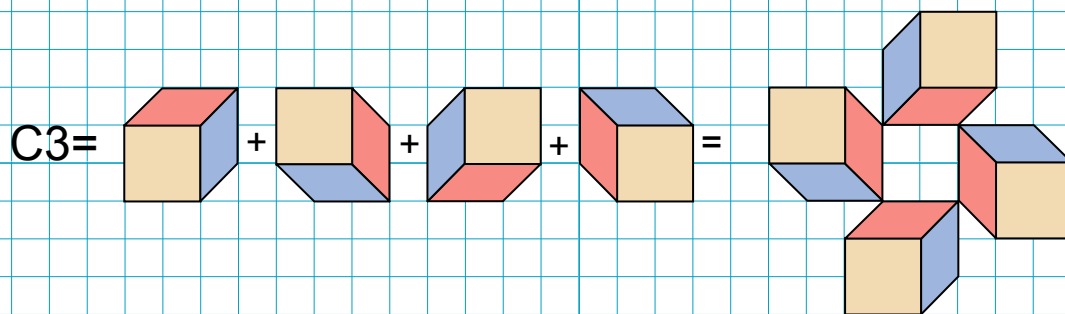
C2-3



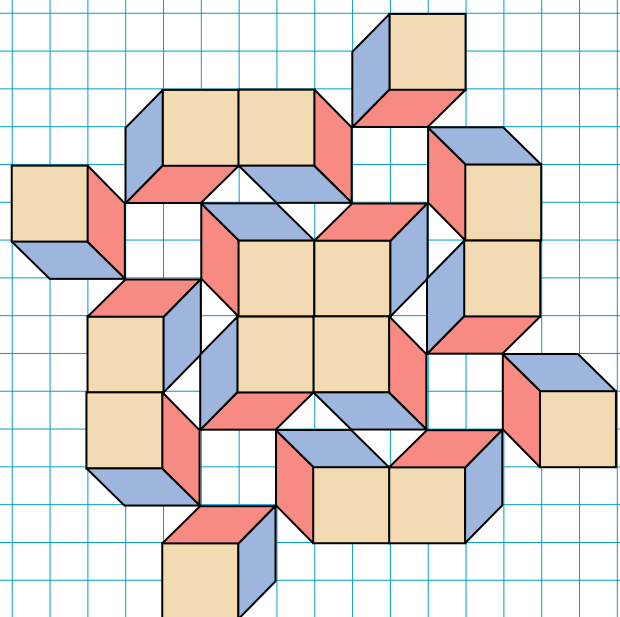
C2-4



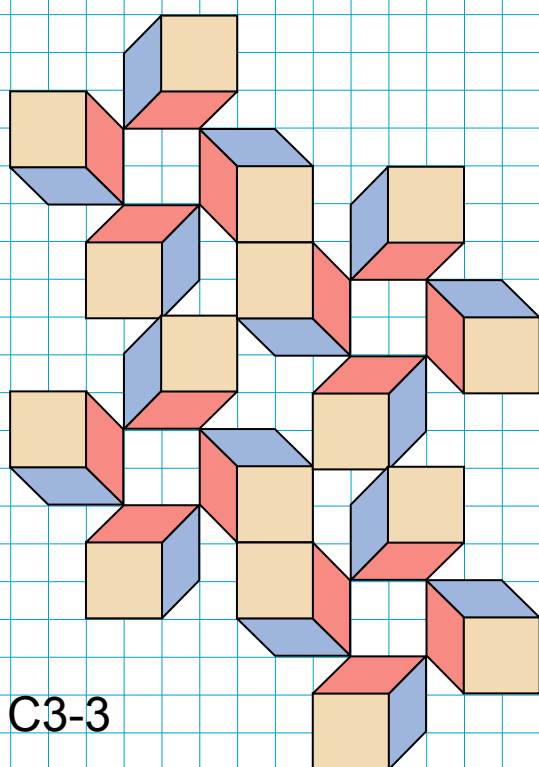
C2-5



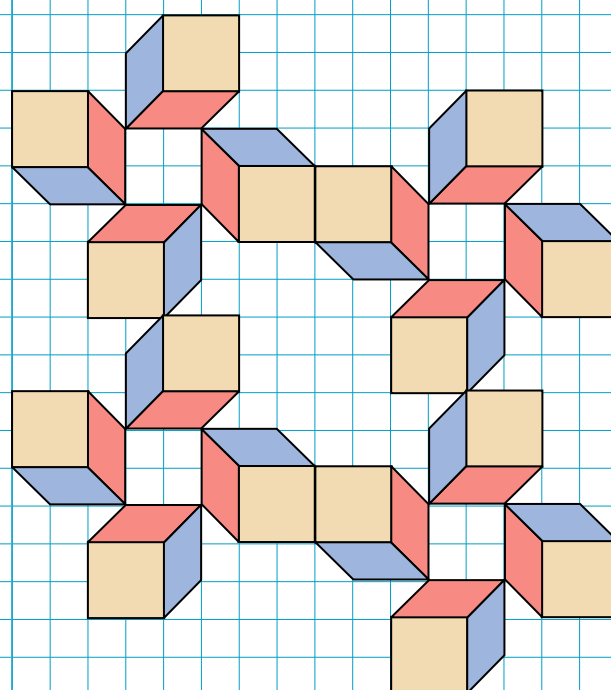
C3-1



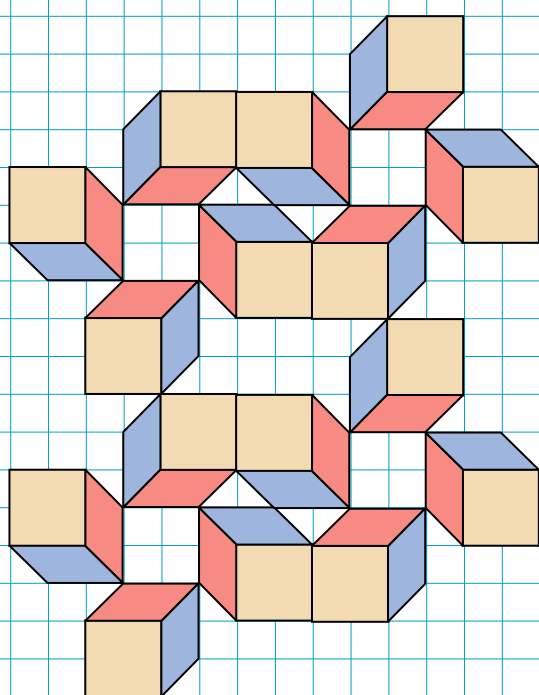
C3-2



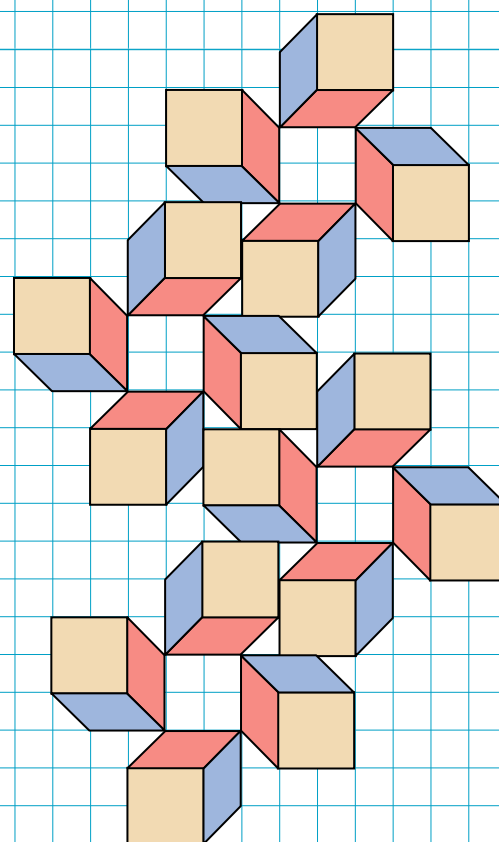
C3-3



C3-4

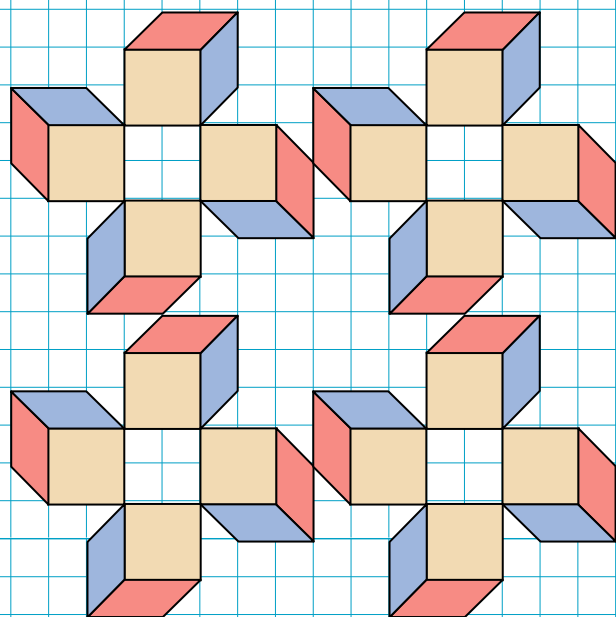


C3-5

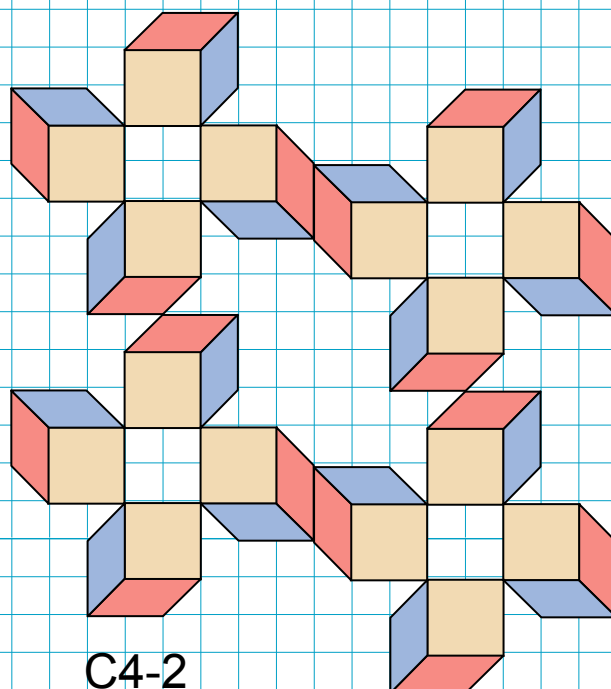


C3-6

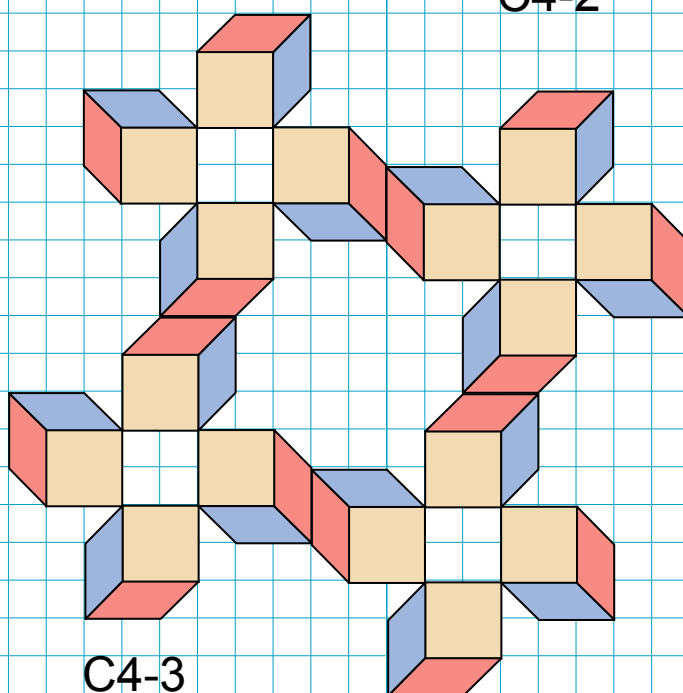
$$C4 = \begin{array}{c} \text{Red Top, Blue Left, Yellow Right} \\ \text{Yellow Top, Red Right, Blue Left} \\ \text{Blue Top, Yellow Right, Red Left} \\ \text{Red Top, Yellow Right, Blue Left} \end{array} = \begin{array}{c} \text{Red Top, Blue Left, Yellow Right} \\ \text{Yellow Top, Red Right, Blue Left} \\ \text{Blue Top, Yellow Right, Red Left} \\ \text{Red Top, Yellow Right, Blue Left} \end{array}$$



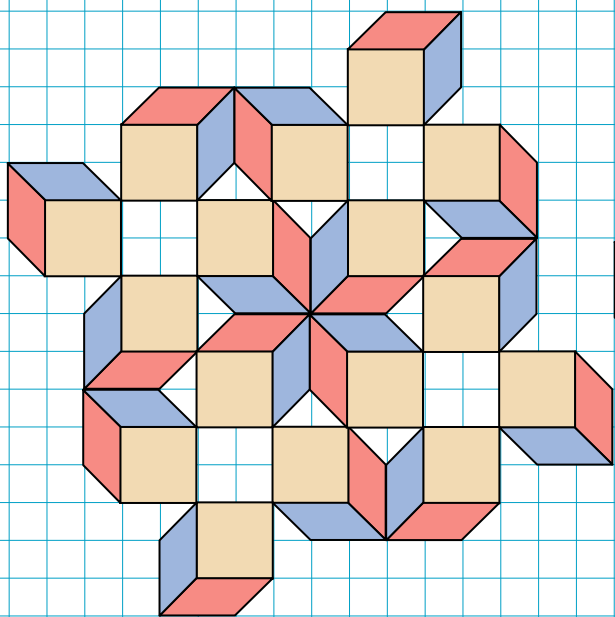
C4-1



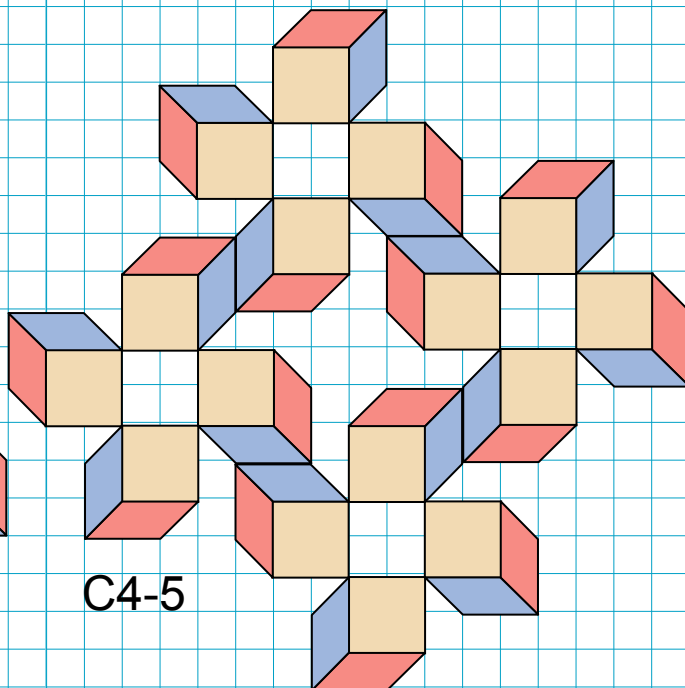
C4-2



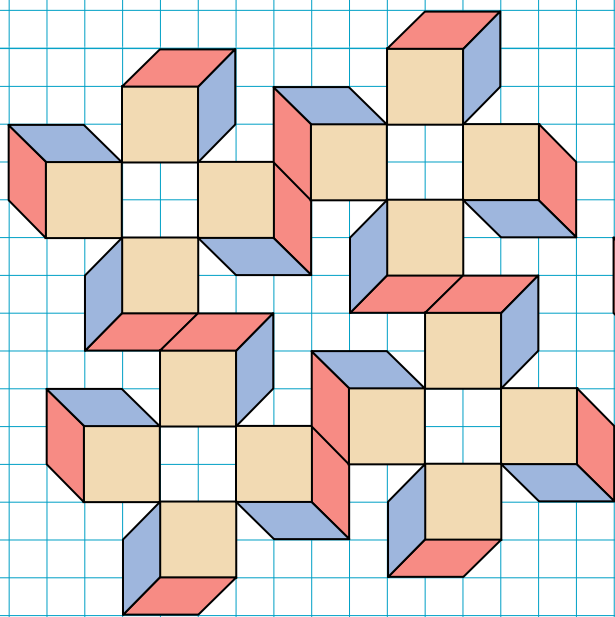
C4-3



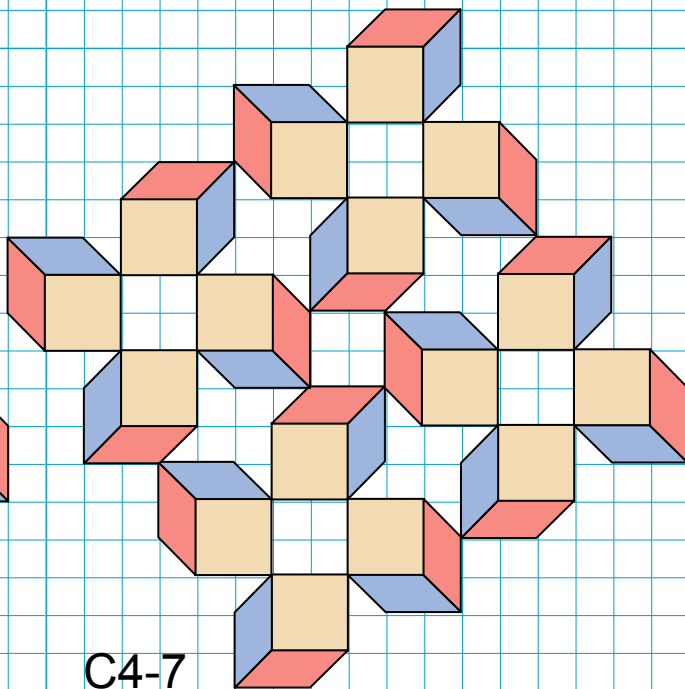
C4-4



C4-5



C4-6

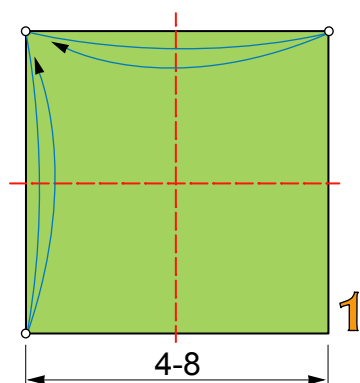


C4-7

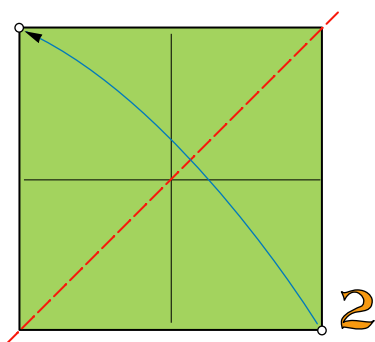
MODULO "GRADI"

Per questo modulo ho eseguito aggregazioni di tipo A1, A2, A3, C1, C2, C3, C4, D1: moduli semplici, ruotati composti e compenetrati.

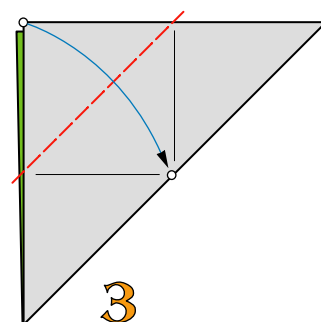
Per chi ne avesse voglia, è possibile proseguire con D2, D3, D4, E1, E2, E3, E4. Adoperate fogli quadrati monocolori, di colore differente, di 4-8 cm di lato.



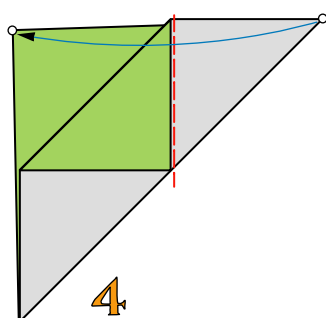
2 pieghe a valle



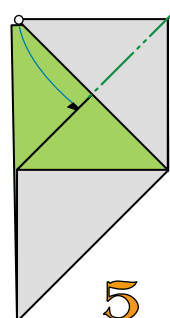
1 piega a valle e ruotate



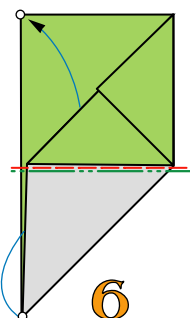
1 piega a valle e ruotate



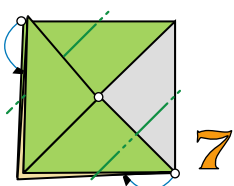
1 piega a valle e ruotate



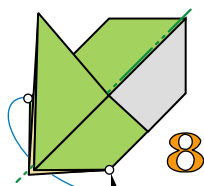
1 piega a monte e intascate



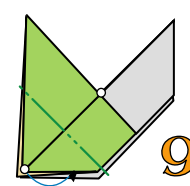
1 piega rovescia interna



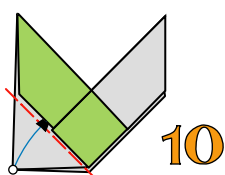
2 pieghe a monte e ruotate



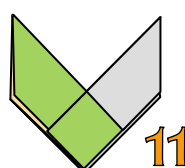
1 piega a monte e ruotate



1 piega a monte e ruotate



1 piega a valle e ruotate

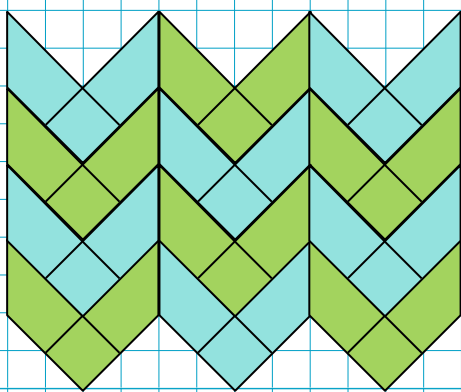
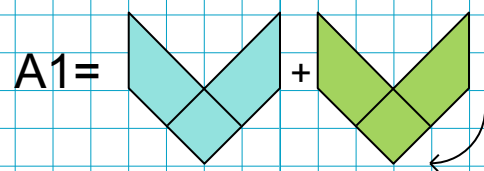


Modulo Gradi ultimato

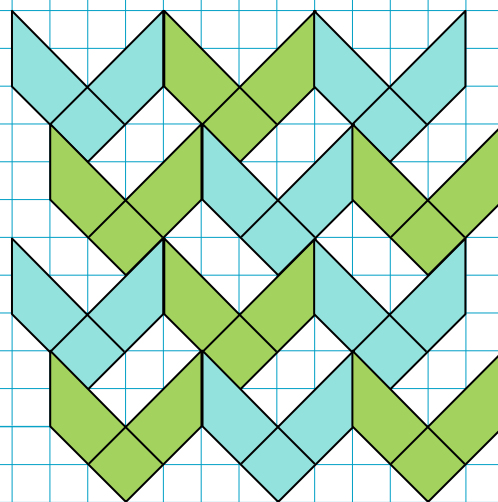


GRADI - COMPOSIZIONI MODULARI

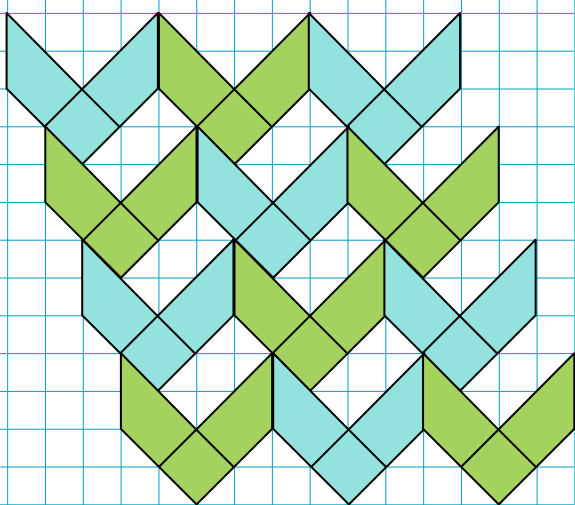
A= 2 MODULI BASE



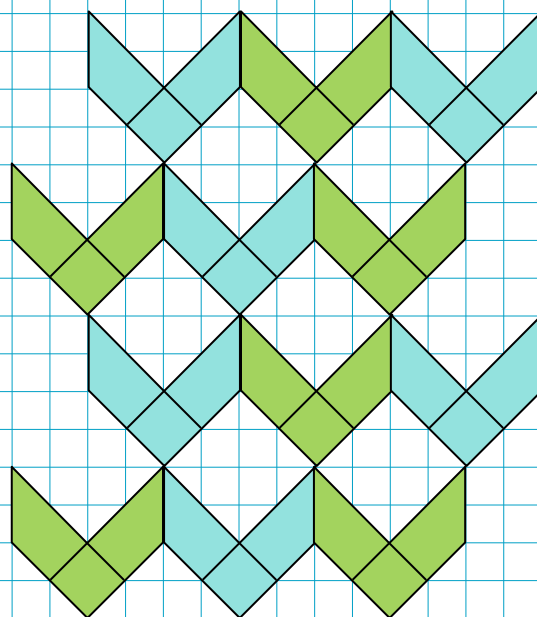
A1-1



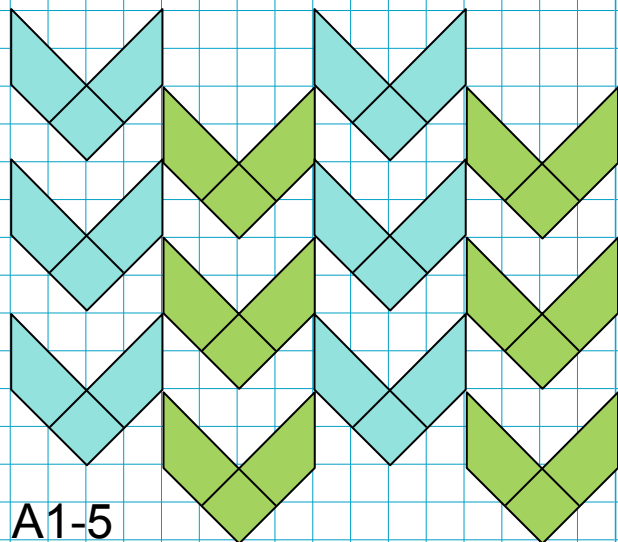
A1-2



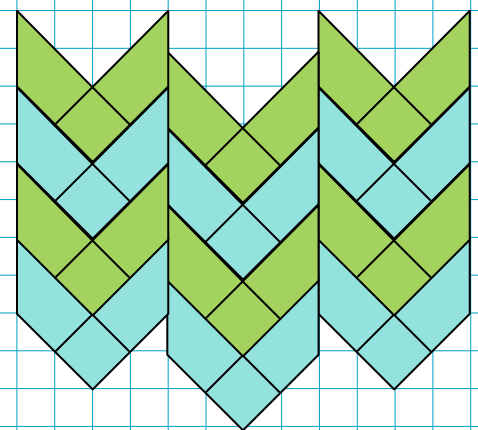
A1-3



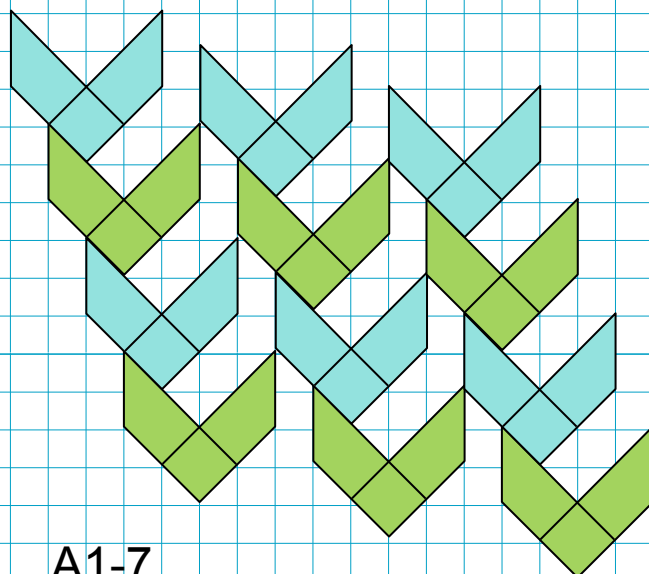
A1-4



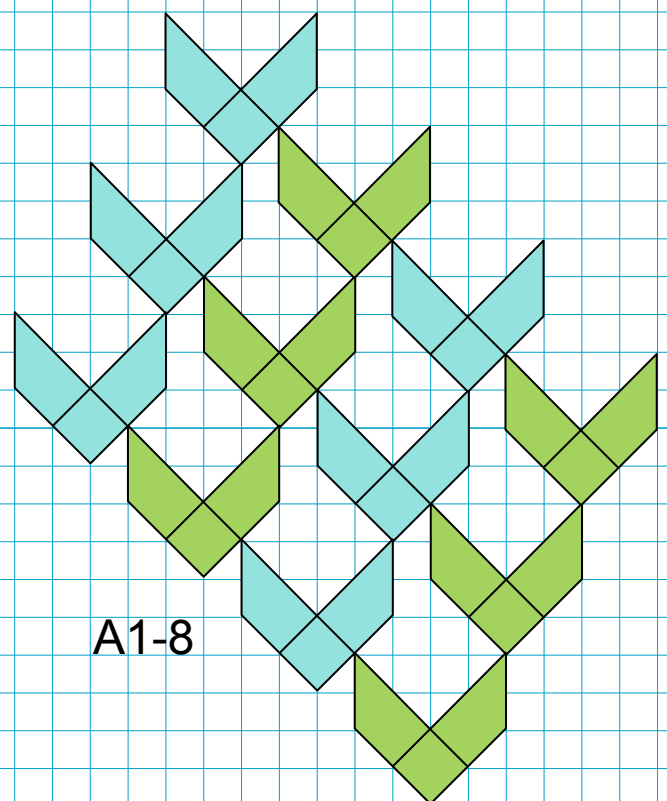
A1-5



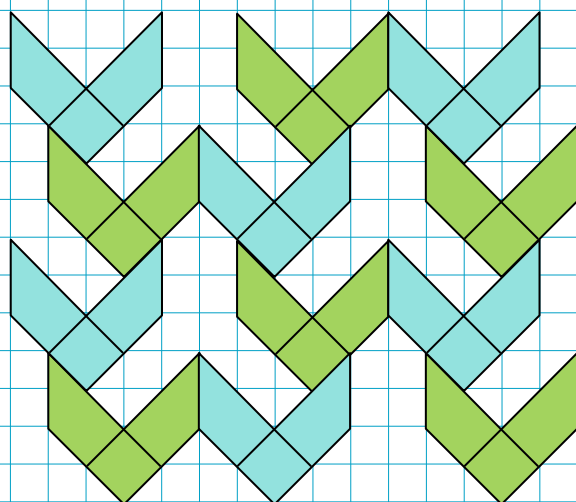
A1-6



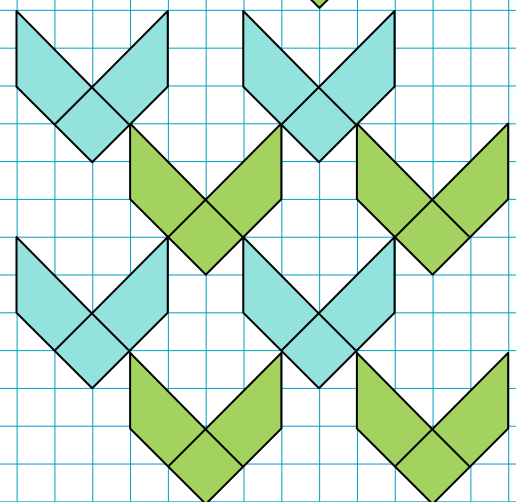
A1-7



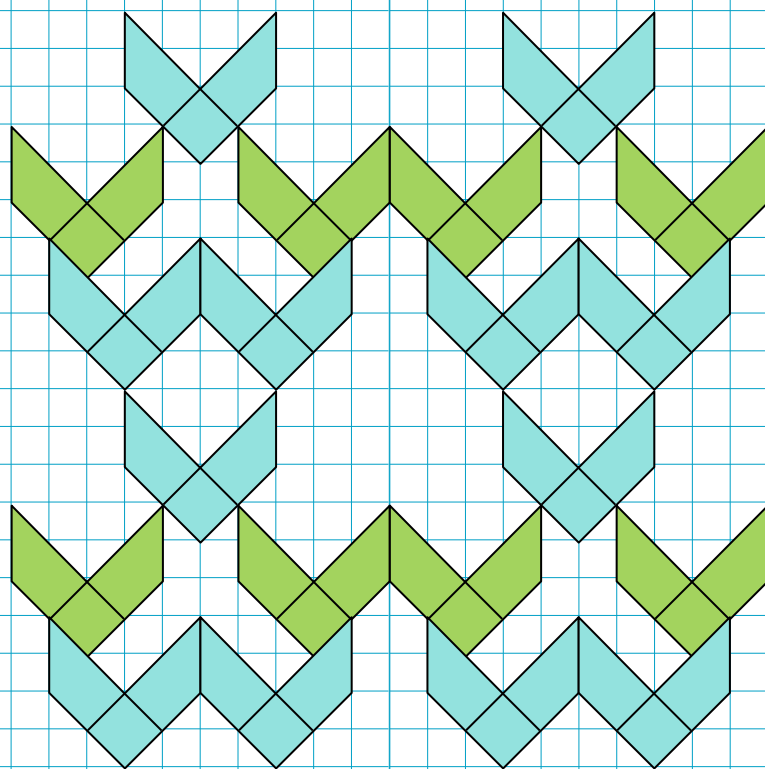
A1-8



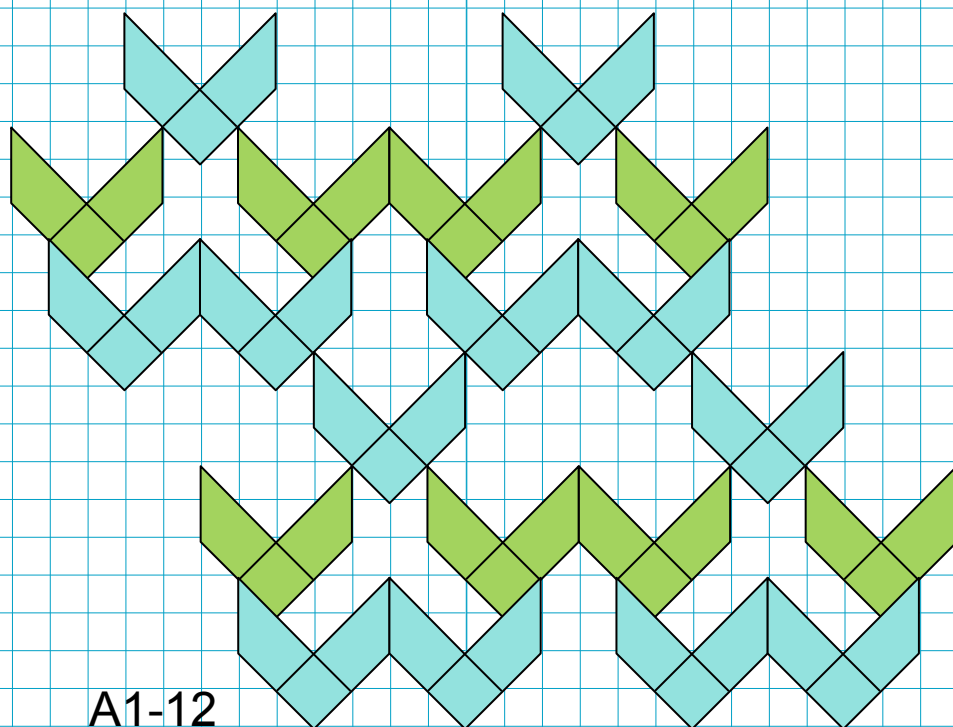
A1-9



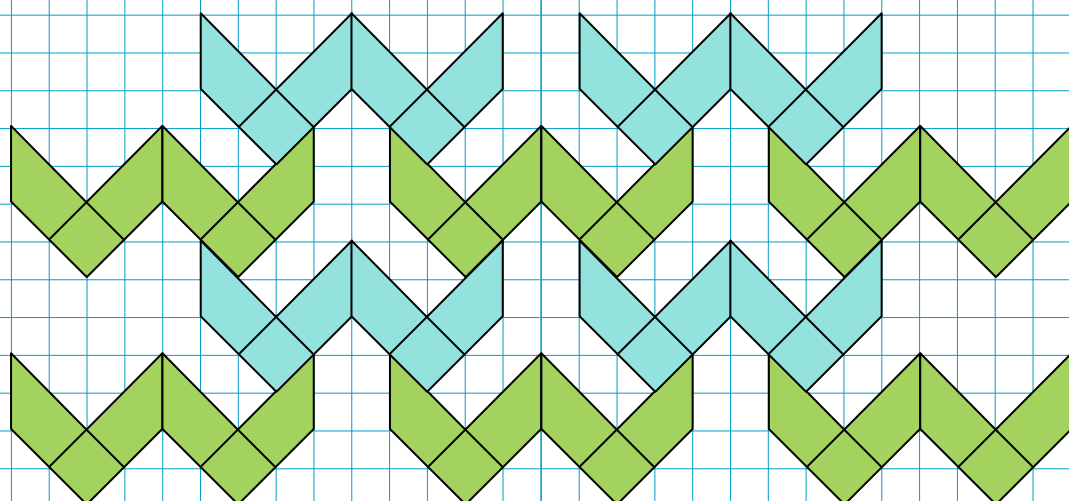
A1-10



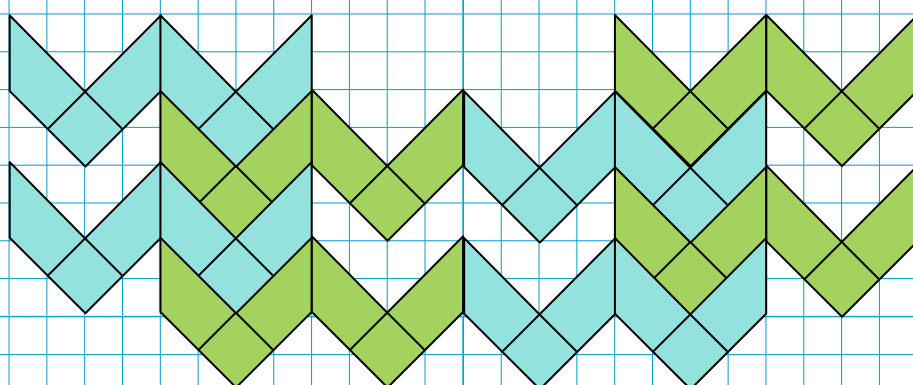
A1-11



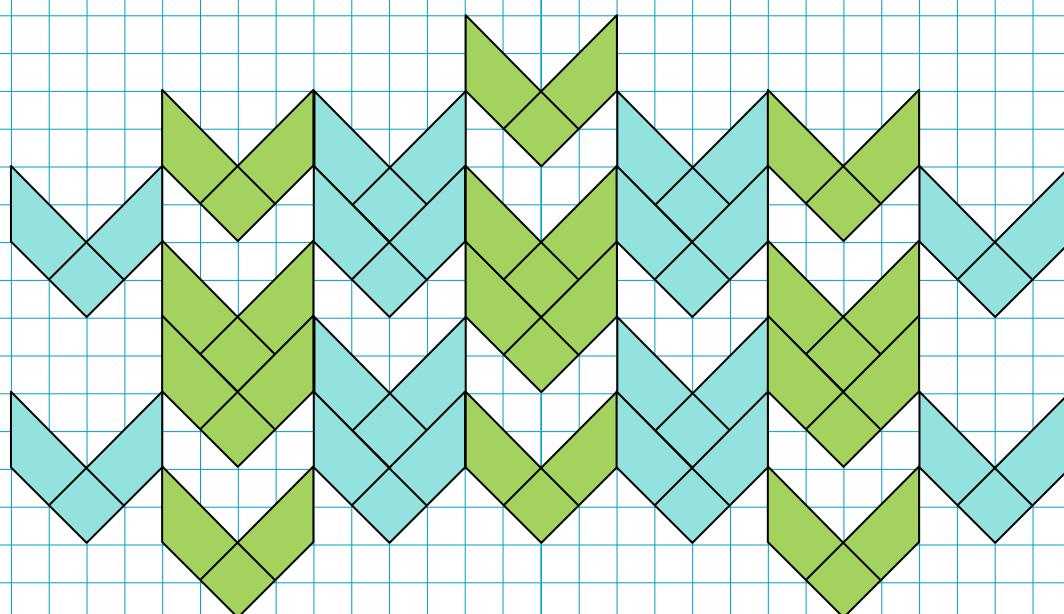
A1-12



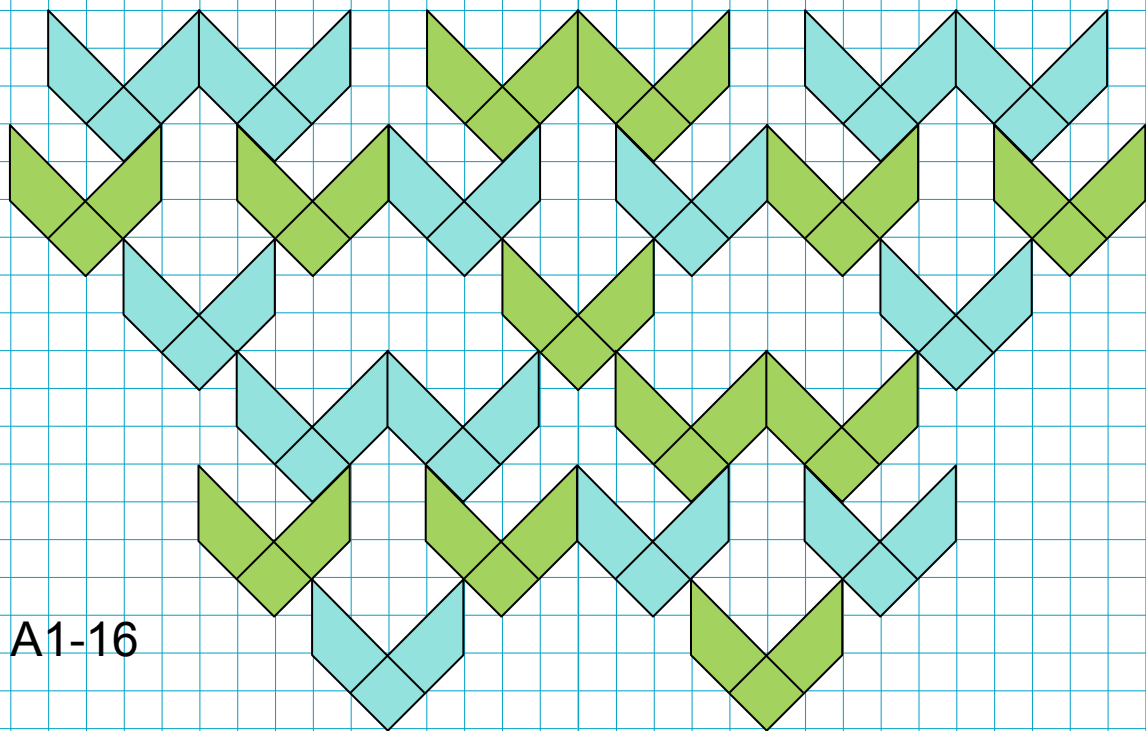
A1-13



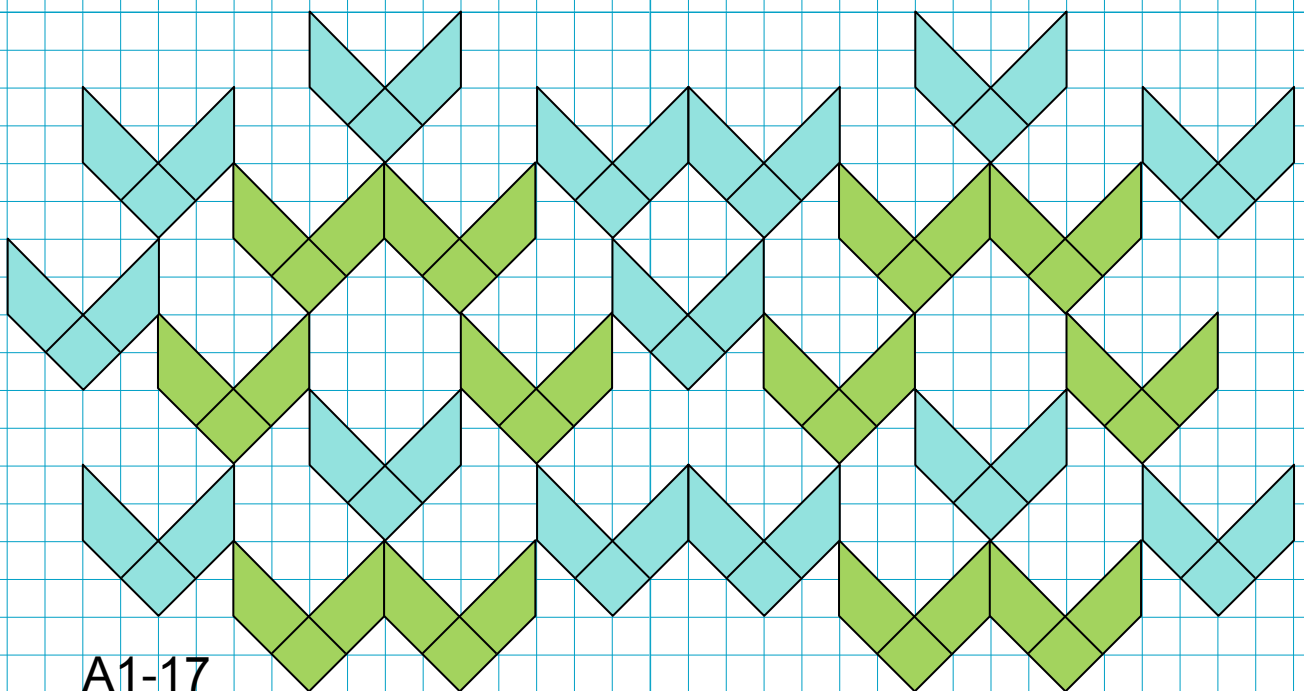
A1-14



A1-15



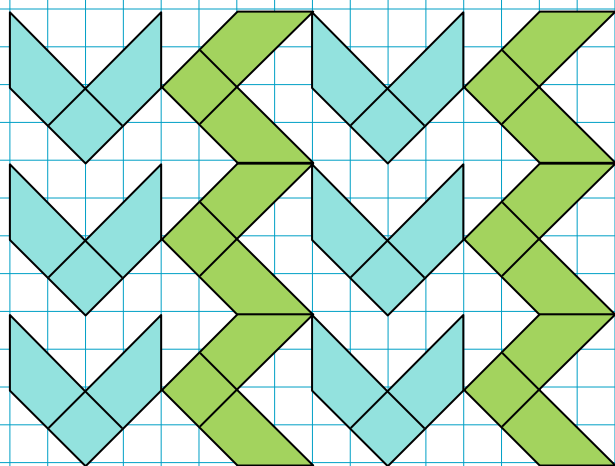
A1-16



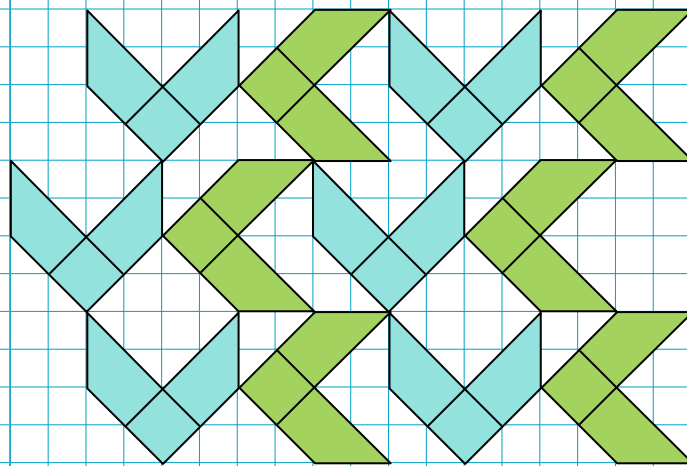
A1-17

$$A2 = \text{cyan chevron} + \text{green chevron}$$

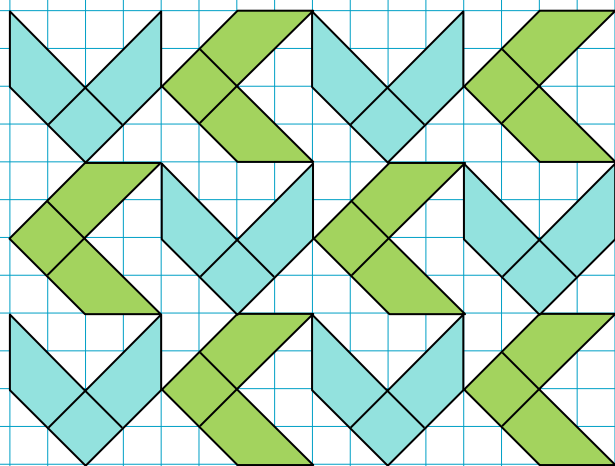
The diagram shows the definition of the A2 unit. It consists of a cyan chevron pointing down and a green chevron pointing up, which is then rotated 180 degrees as indicated by the curved arrow.



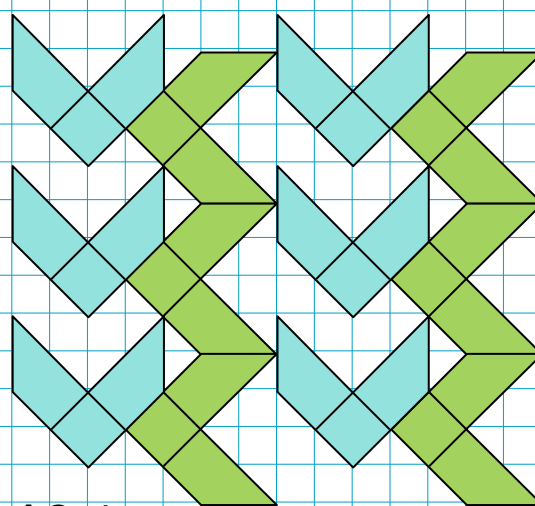
A2-1



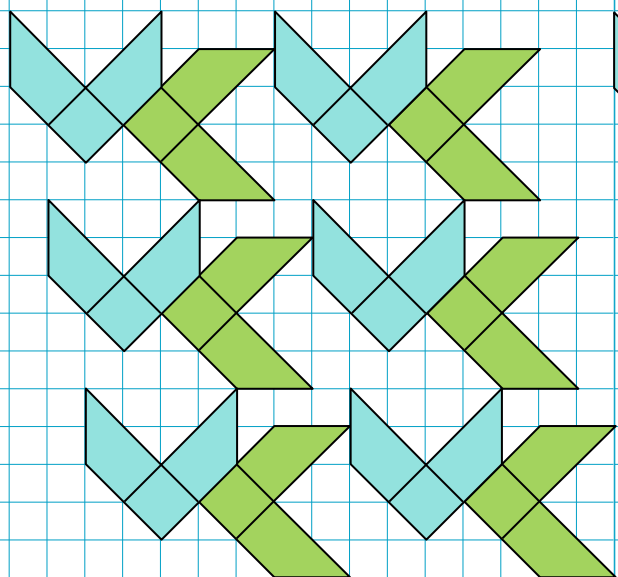
A2-2



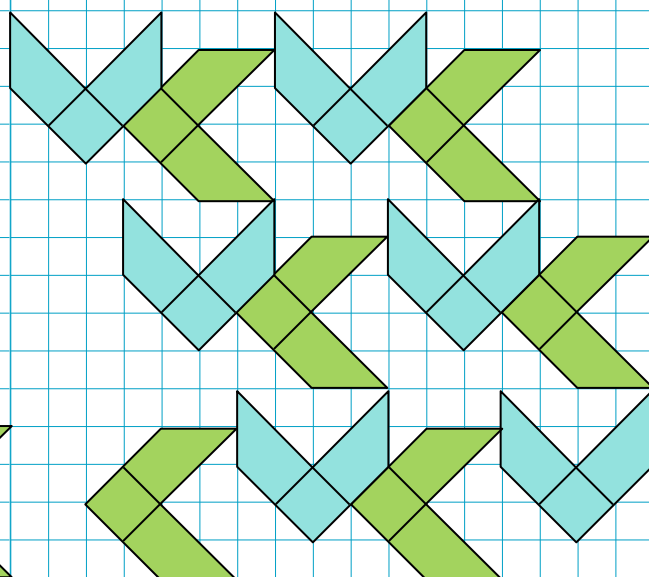
A2-3



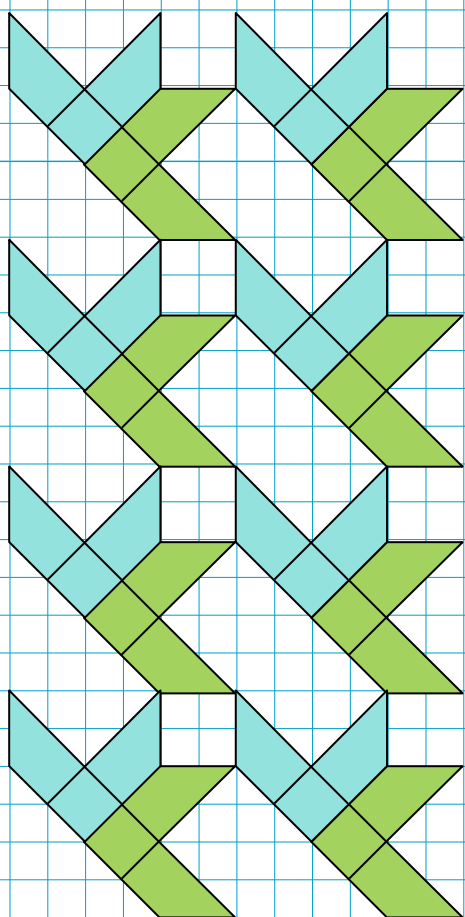
A2-4



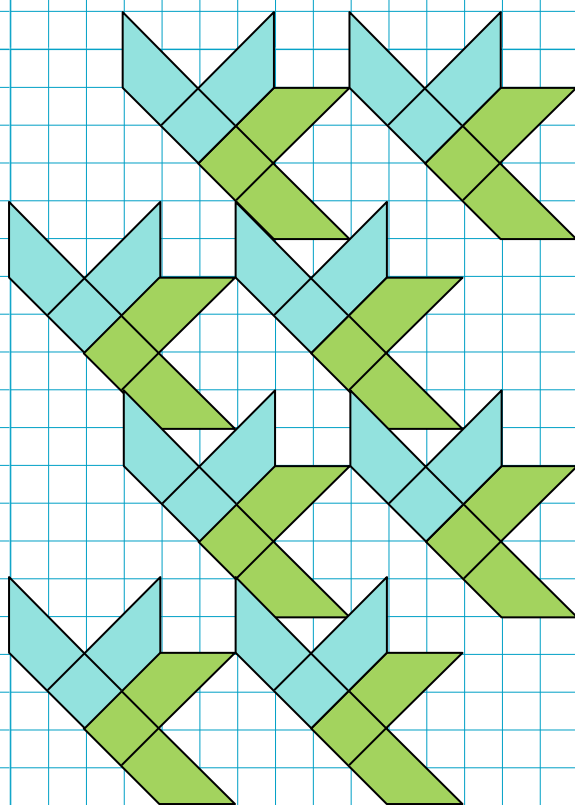
A2-5



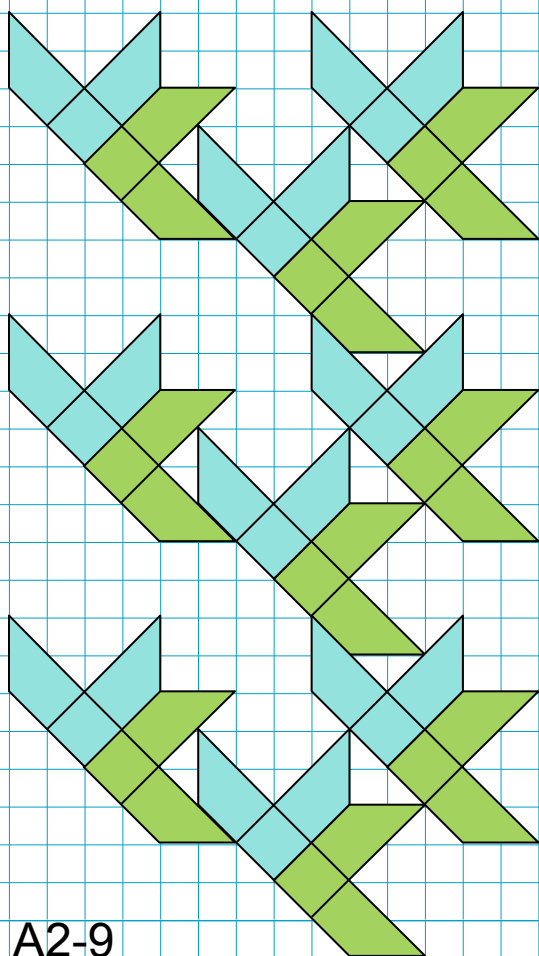
A2-6



A2-7

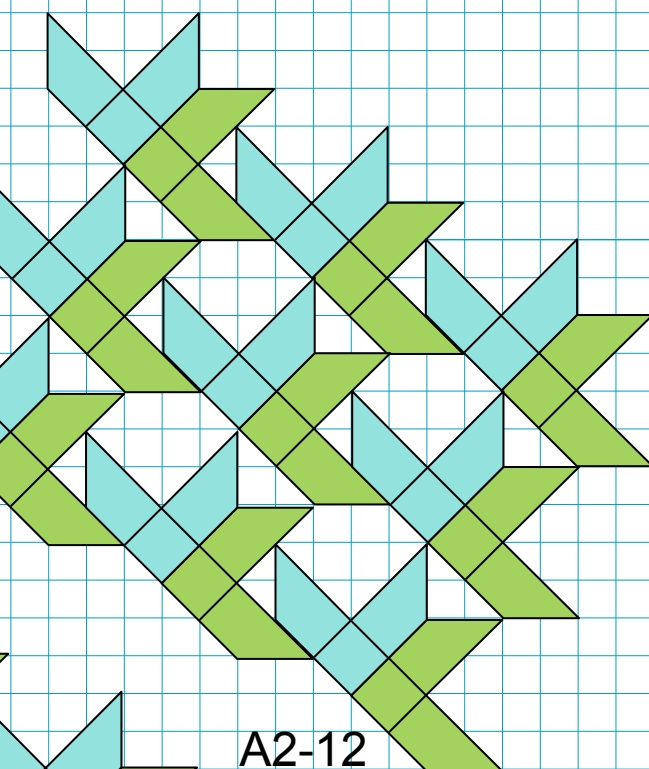


A2-8

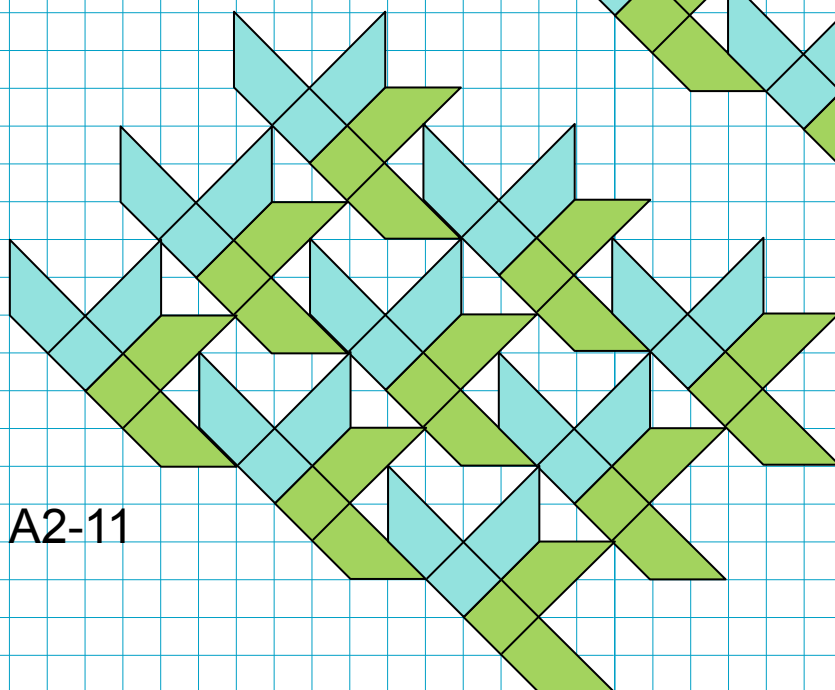


A2-9

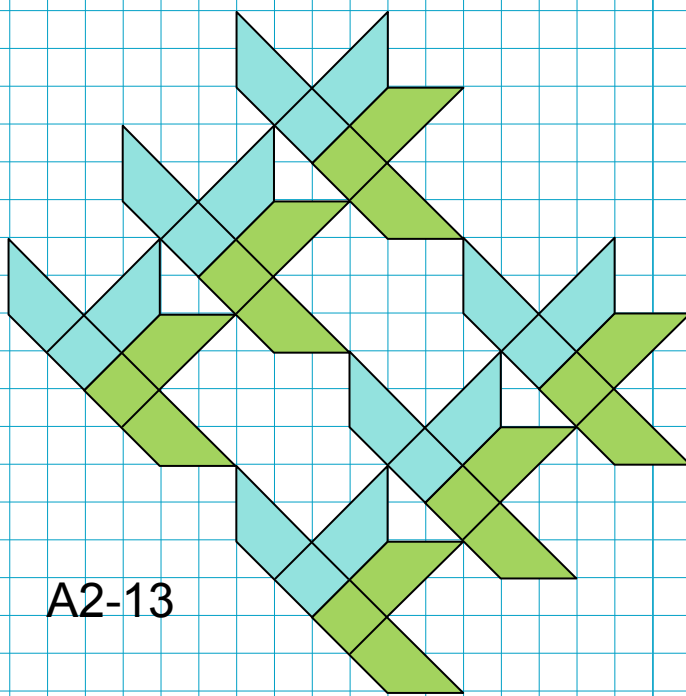
A2-10



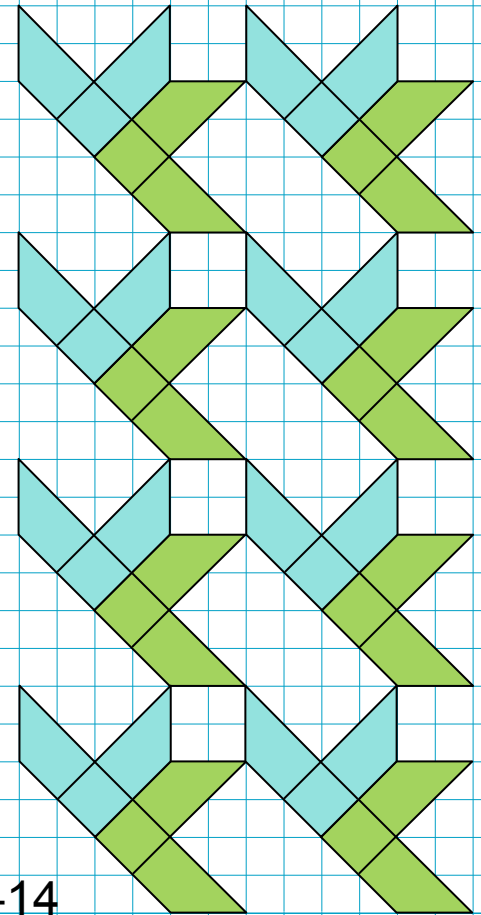
A2-12



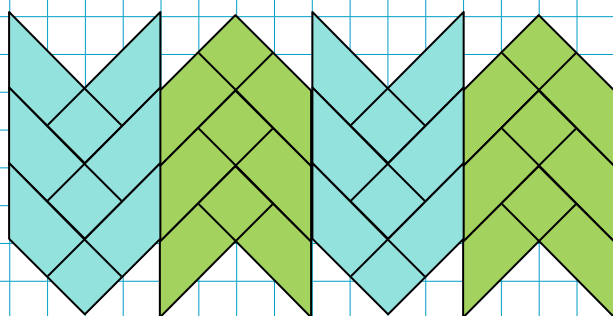
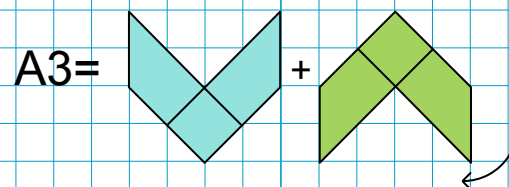
A2-11



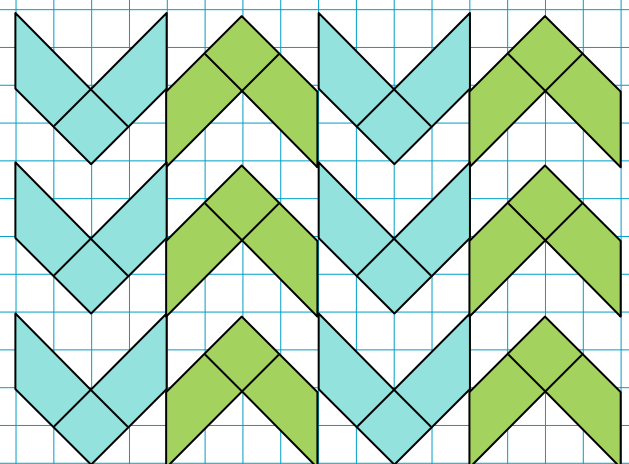
A2-13



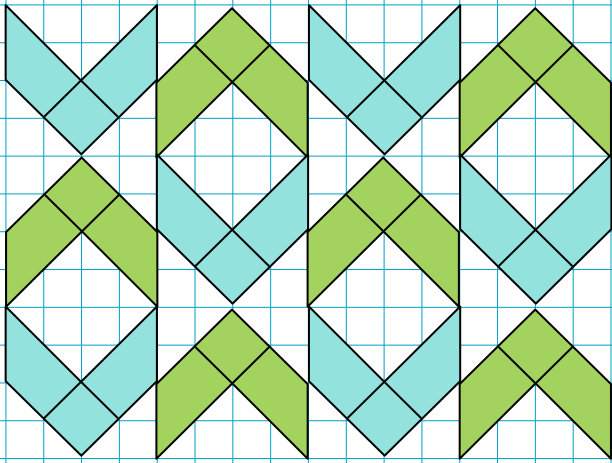
A2-14



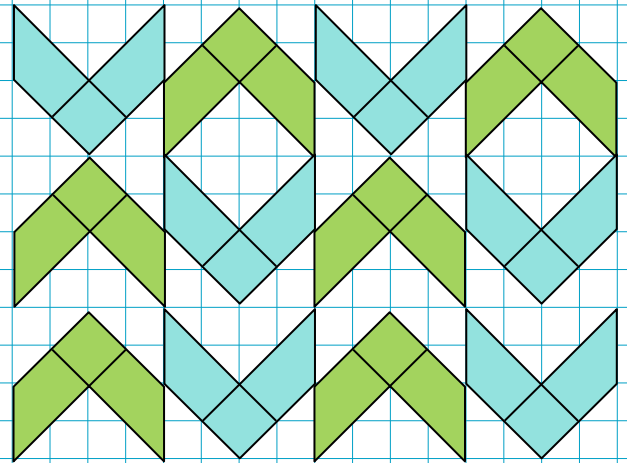
A3-1



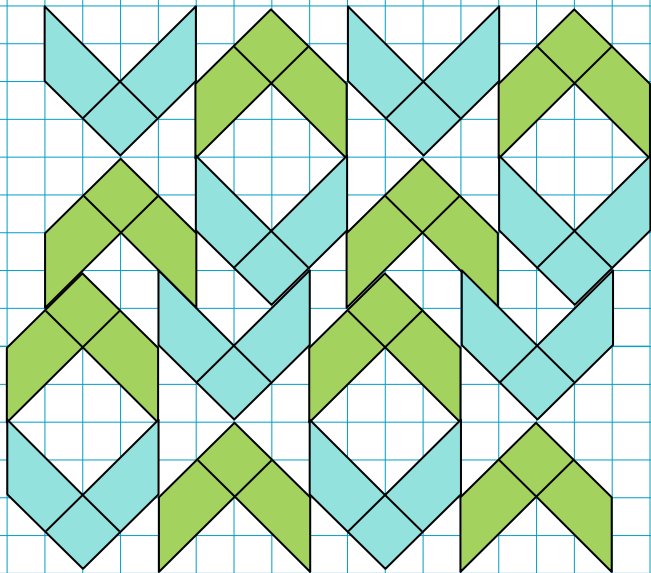
A3-2



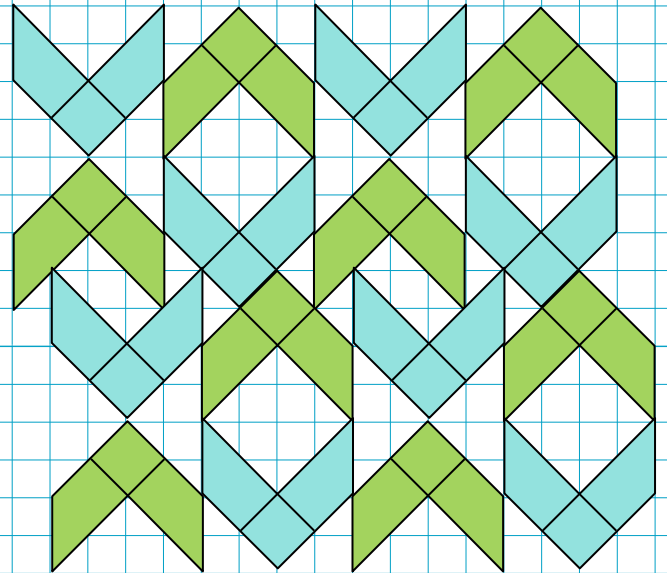
A3-3



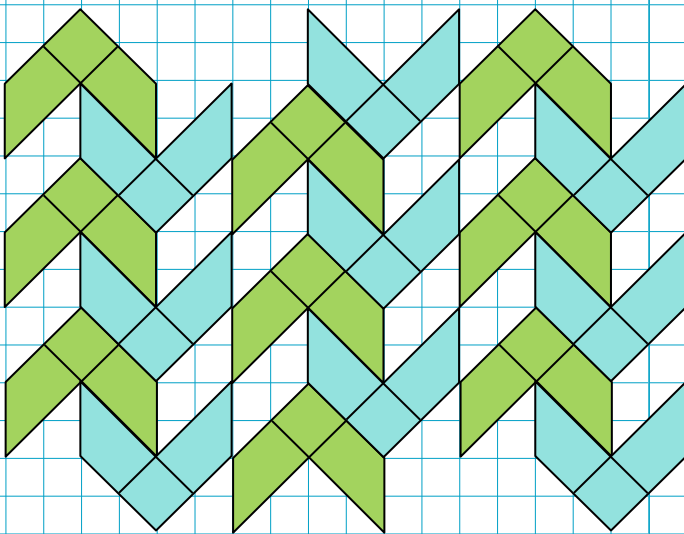
A3-4



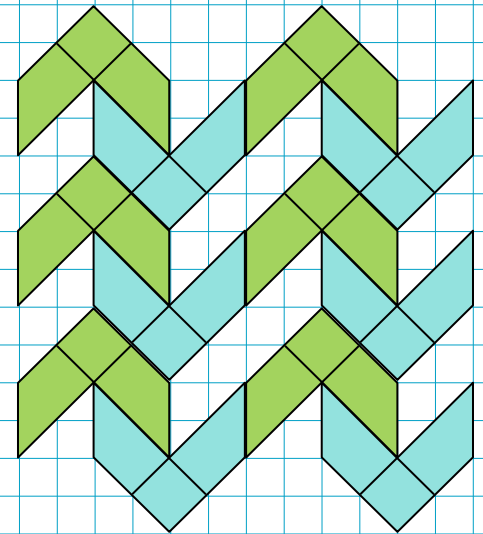
A3-5



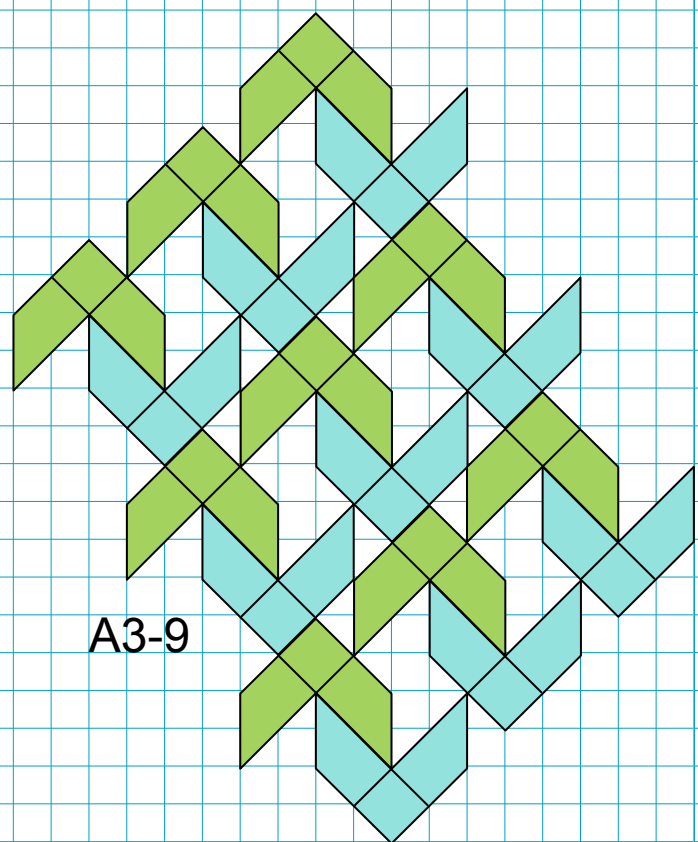
A3-6



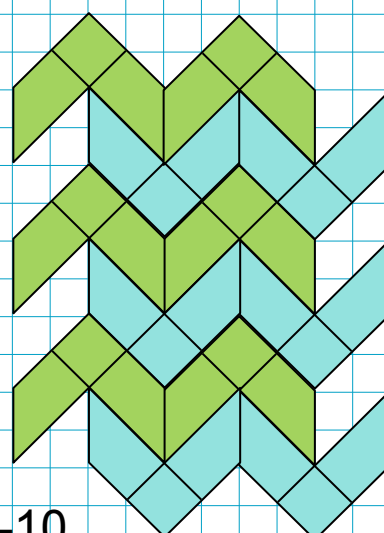
A3-7



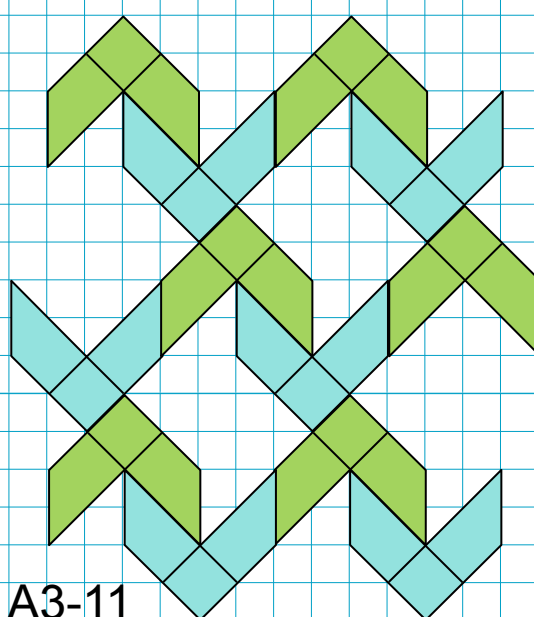
A3-8



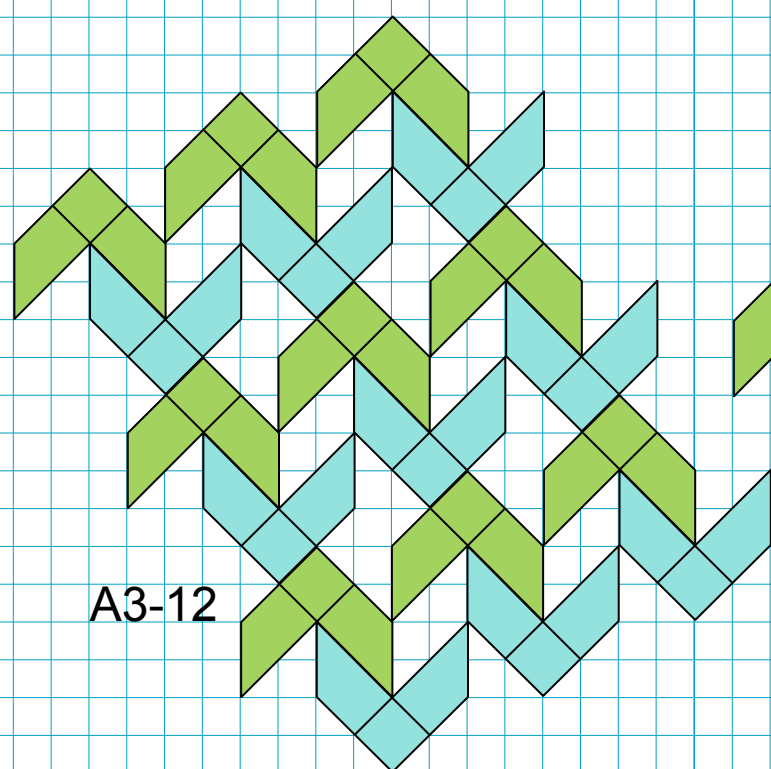
A3-9



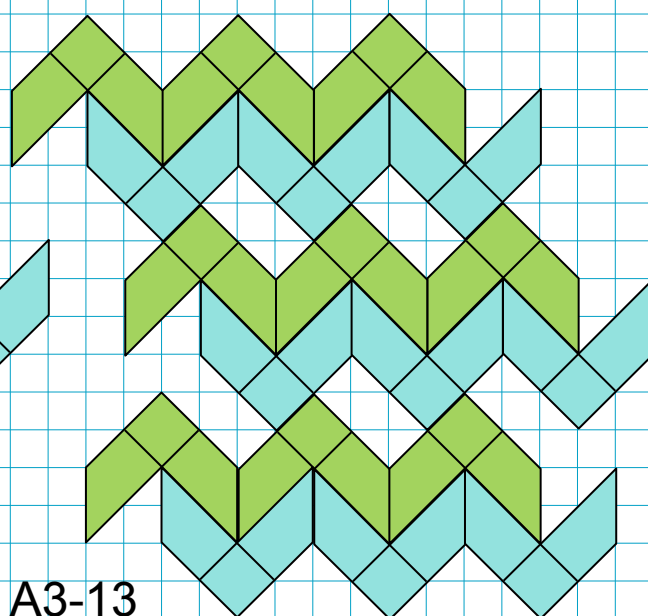
A3-10



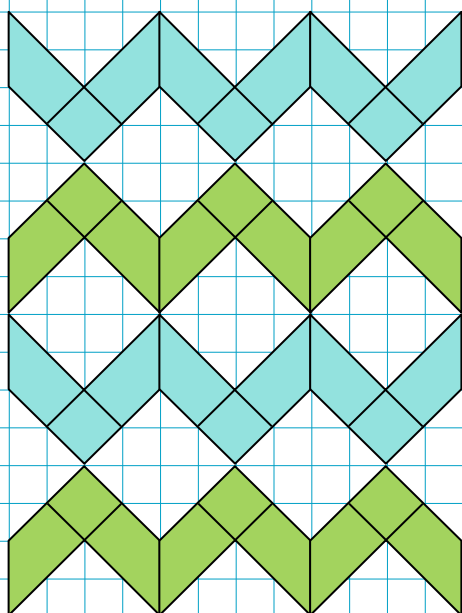
A3-11



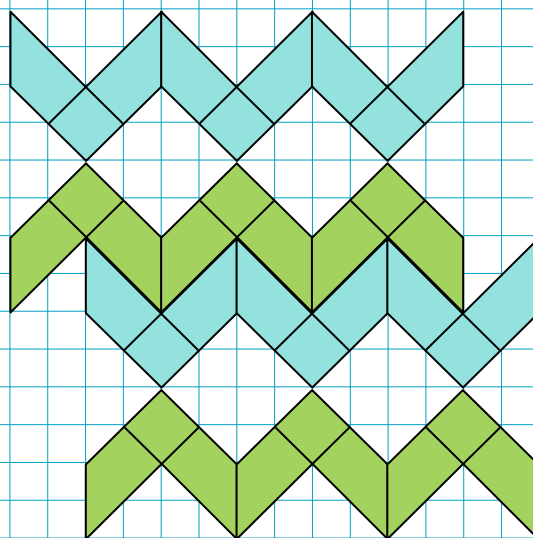
A3-12



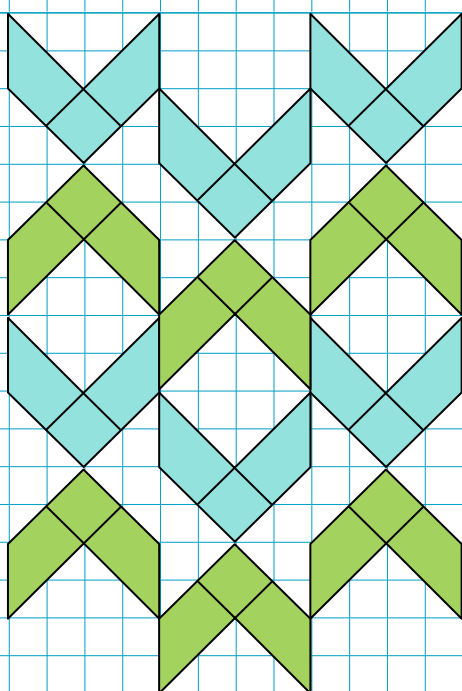
A3-13



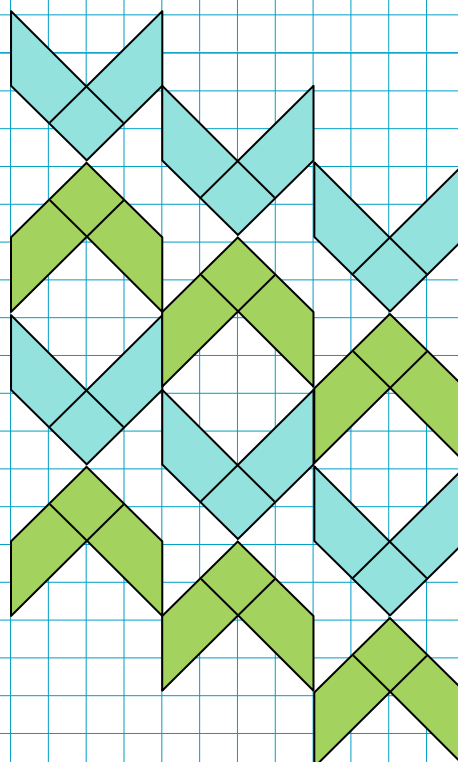
A3-14



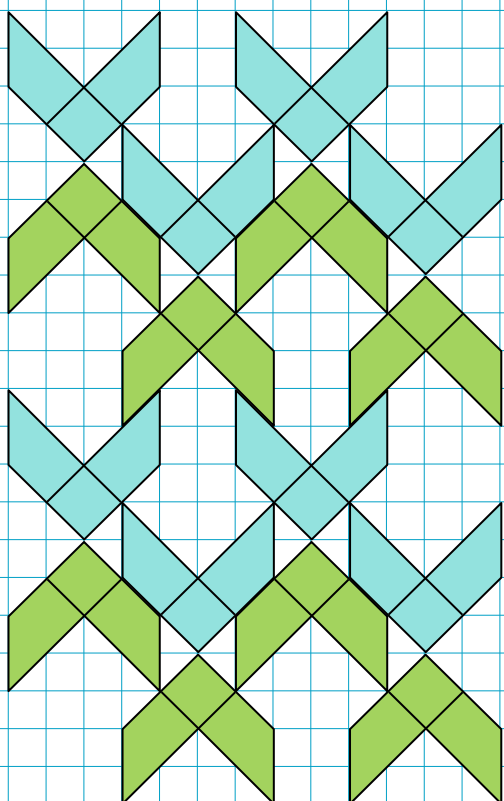
A3-15



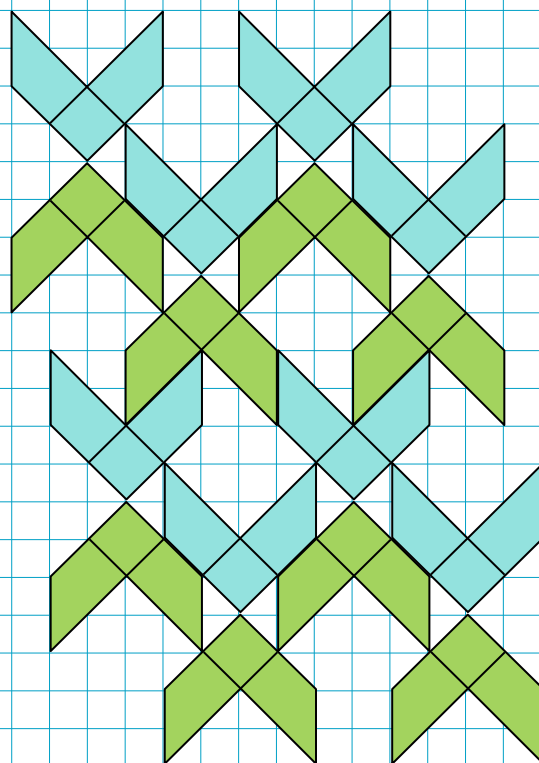
A3-16



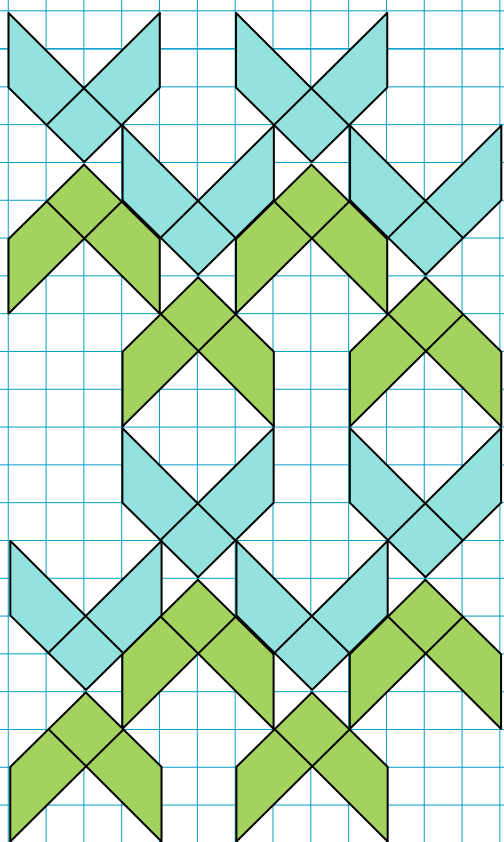
A3-17



A3-18

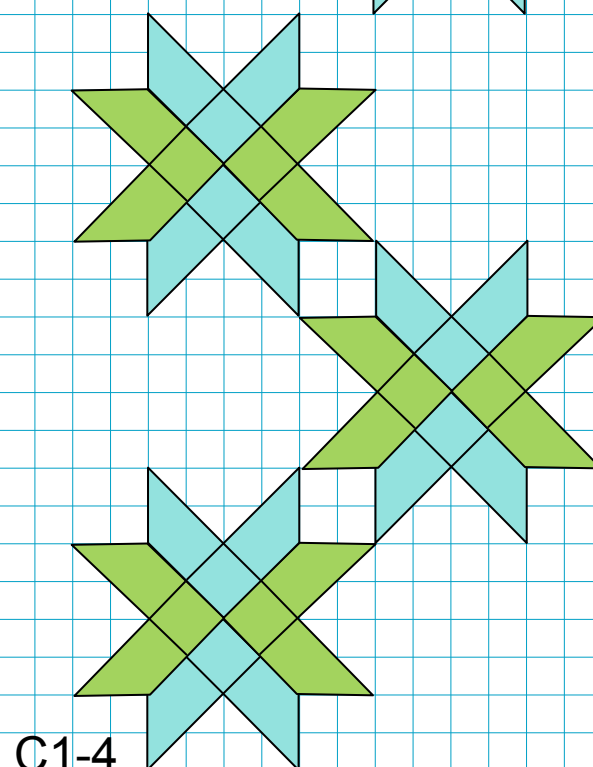
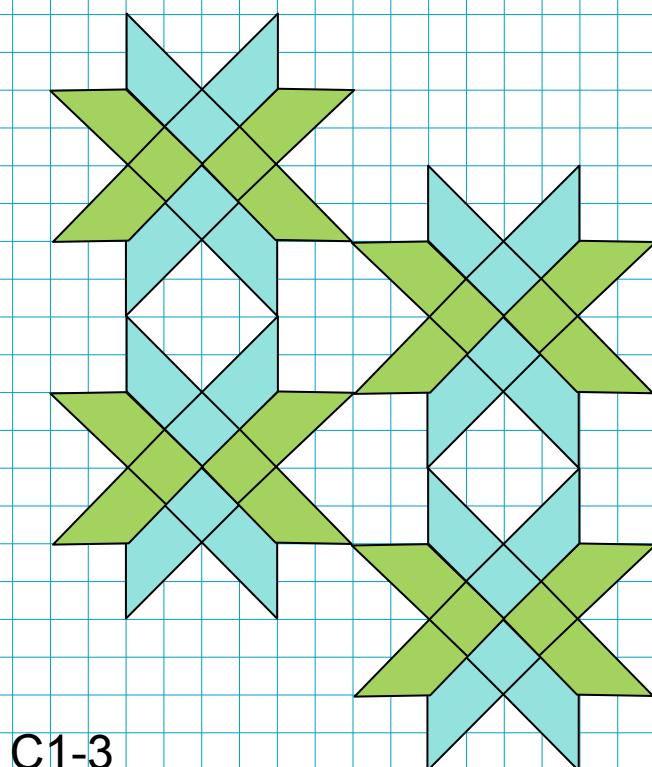
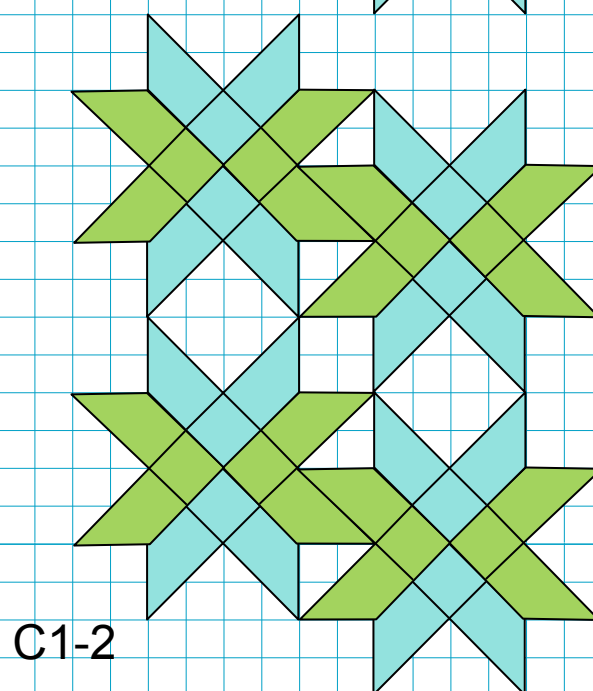
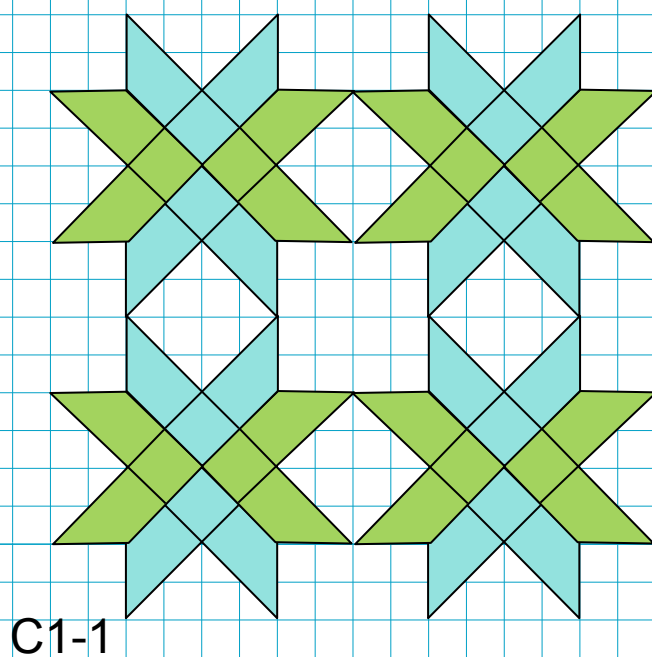
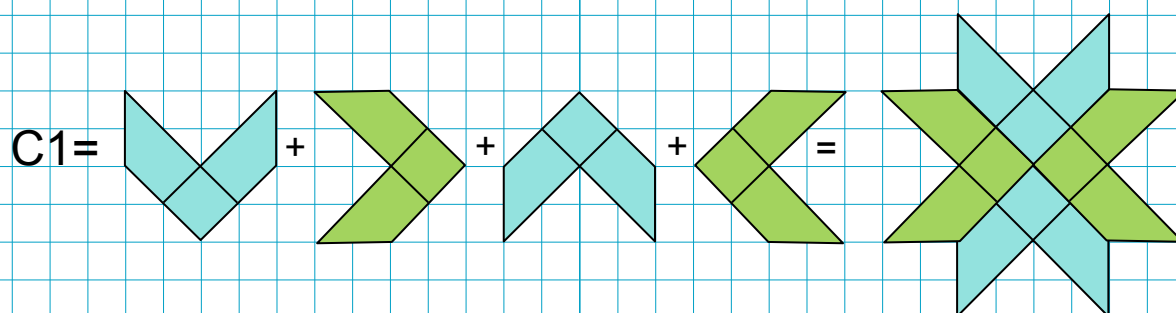


A3-19

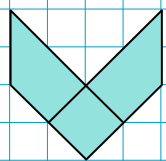


A3-20

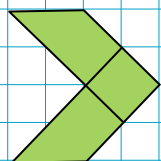
C=MODULO COMPOSTO DA 4 MODULI BASE



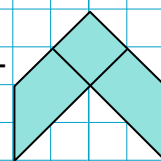
C2=



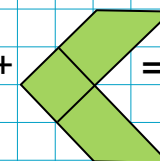
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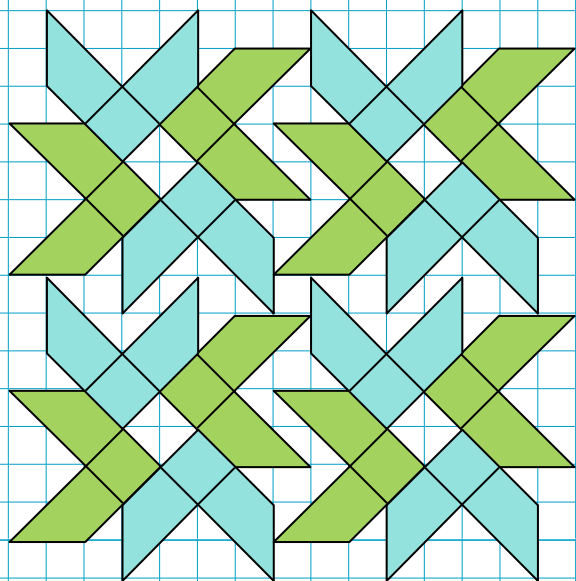
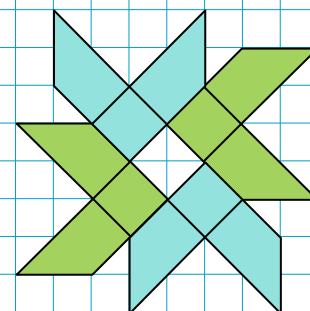
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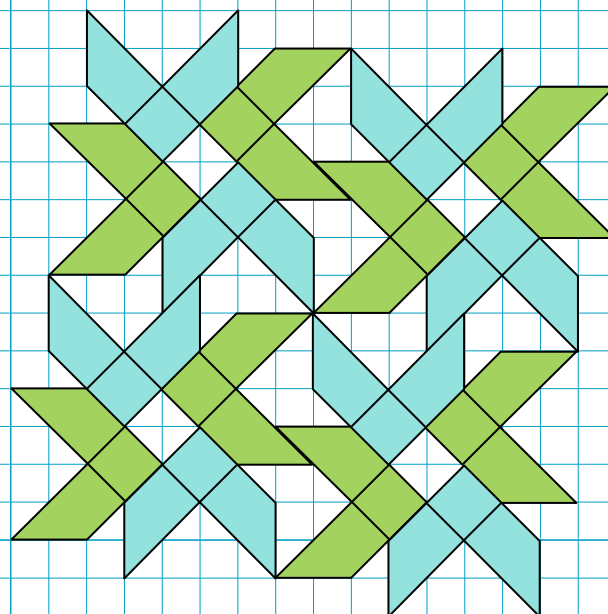
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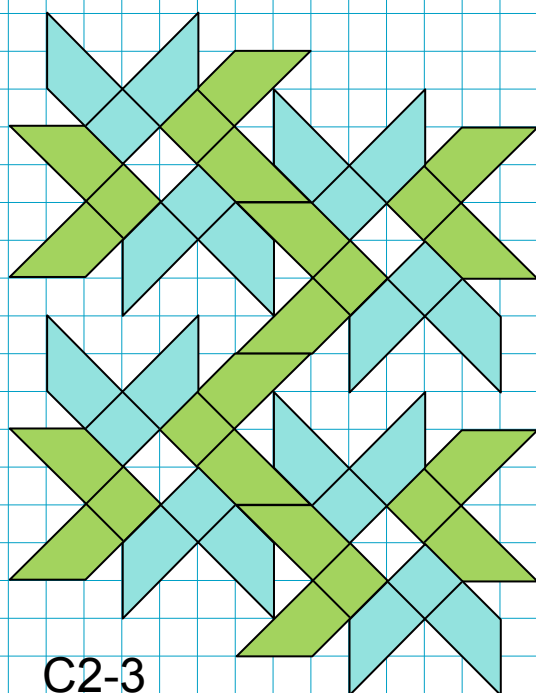
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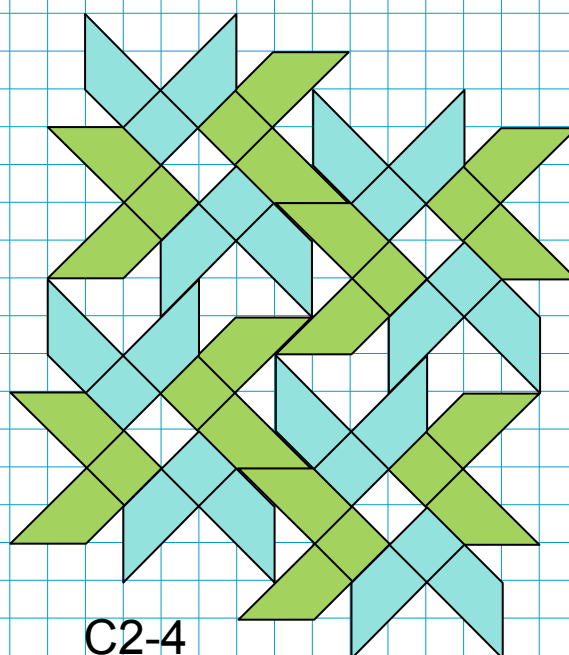
C2-1



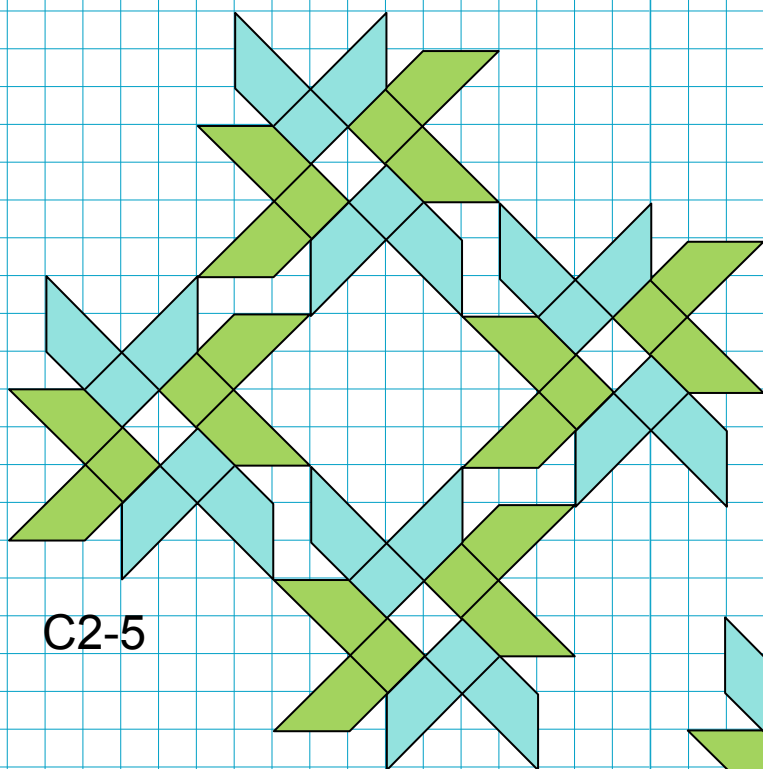
C2-2



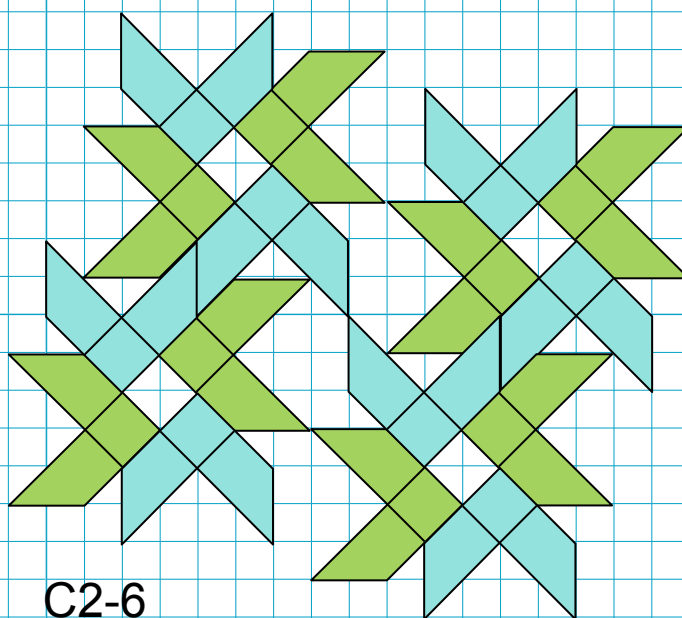
C2-3



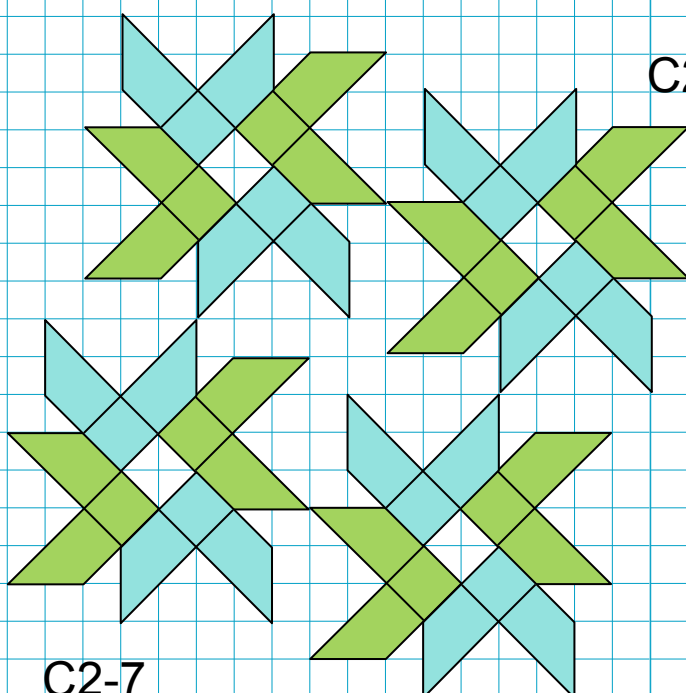
C2-4



C2-5

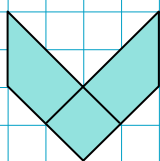


C2-6

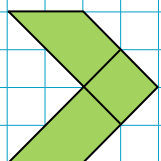


C2-7

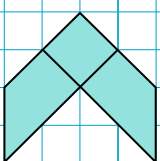
C3=



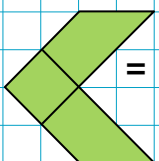
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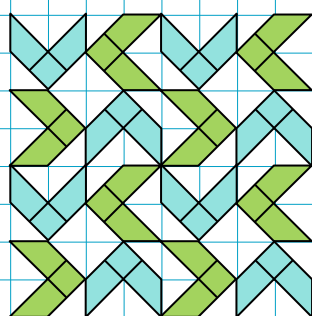
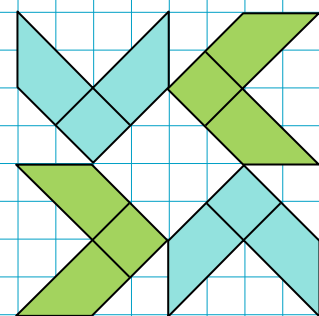
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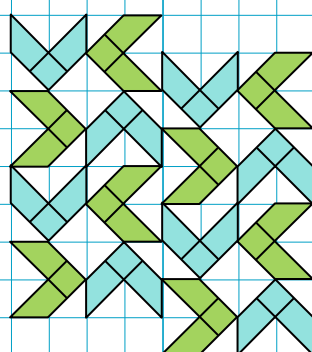
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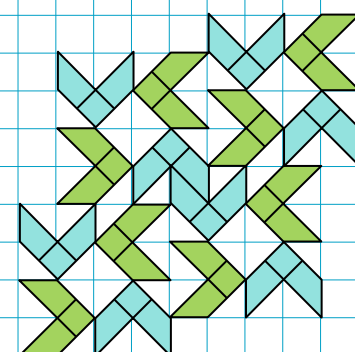
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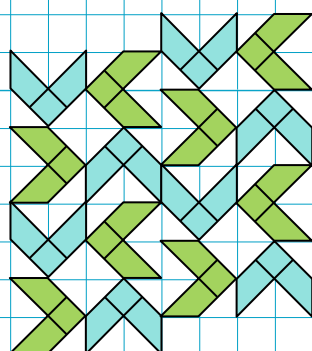
C3-1



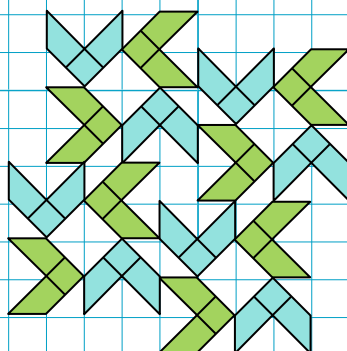
C3-2



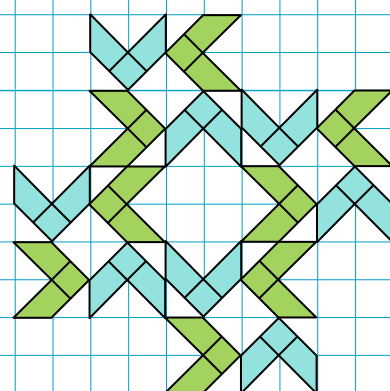
C3-3



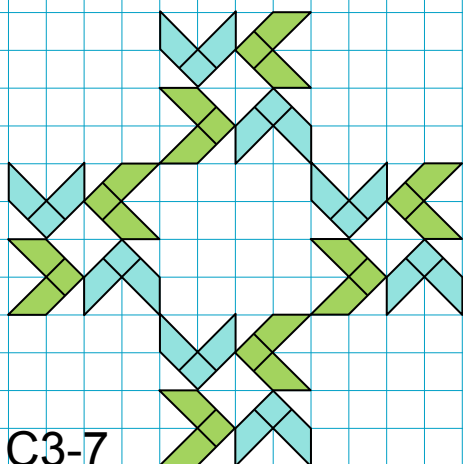
C3-4



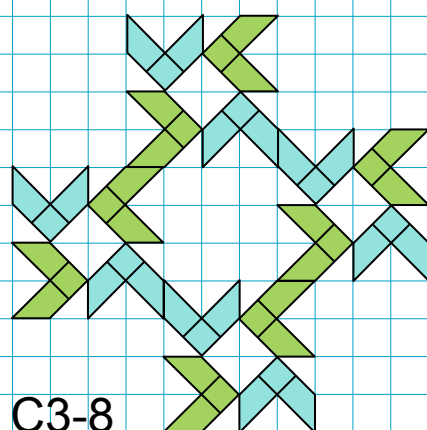
C3-5



C3-6

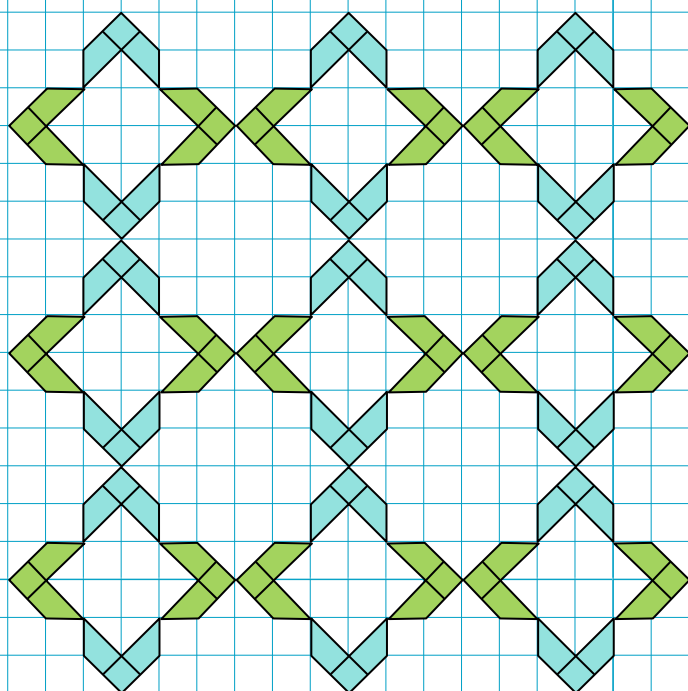
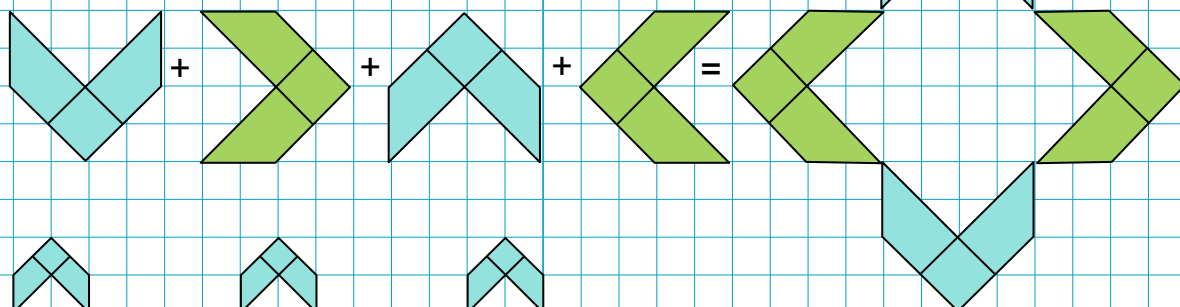


C3-7

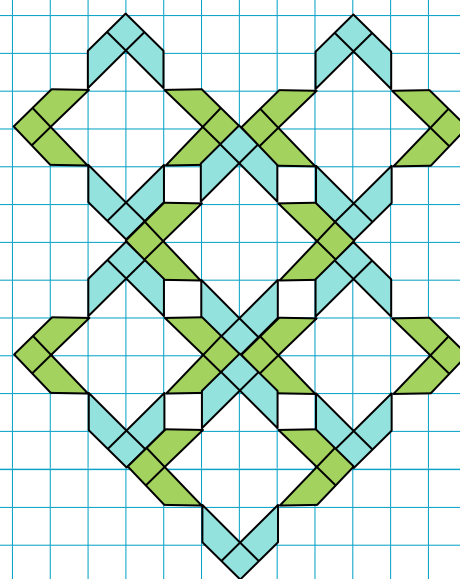


C3-8

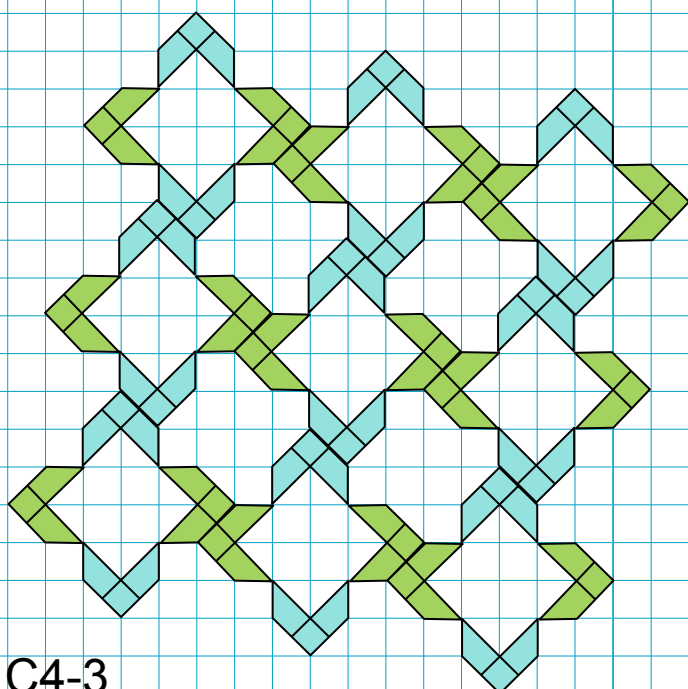
C4=



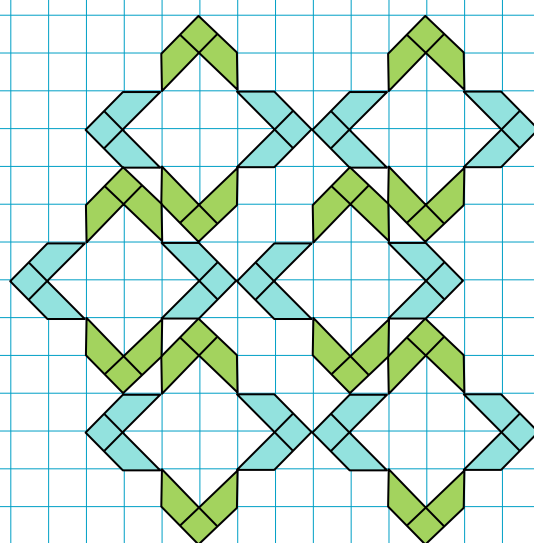
C4-1



C4-2

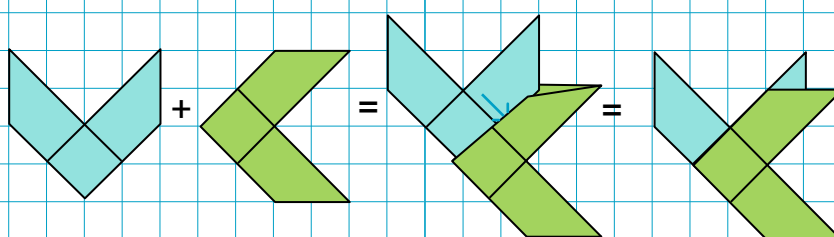


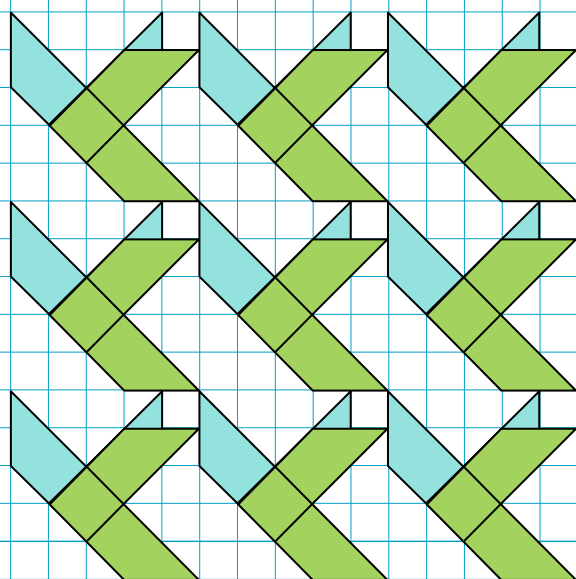
C4-3



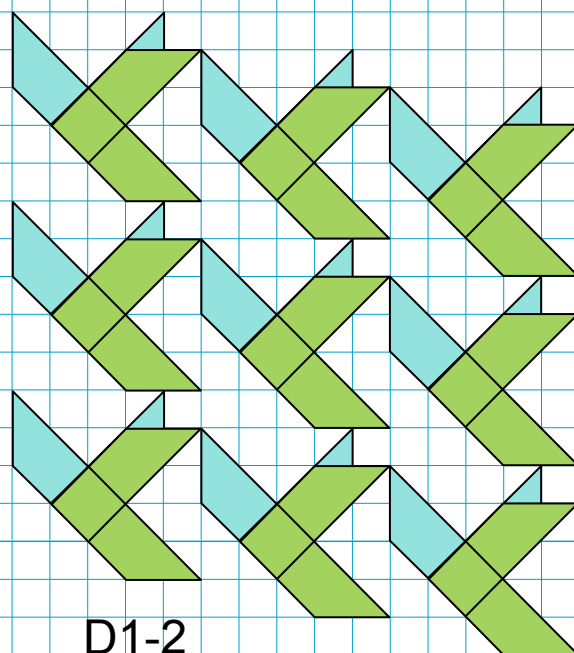
C4-4

D=2 MODULI BASE COMPENETRATI

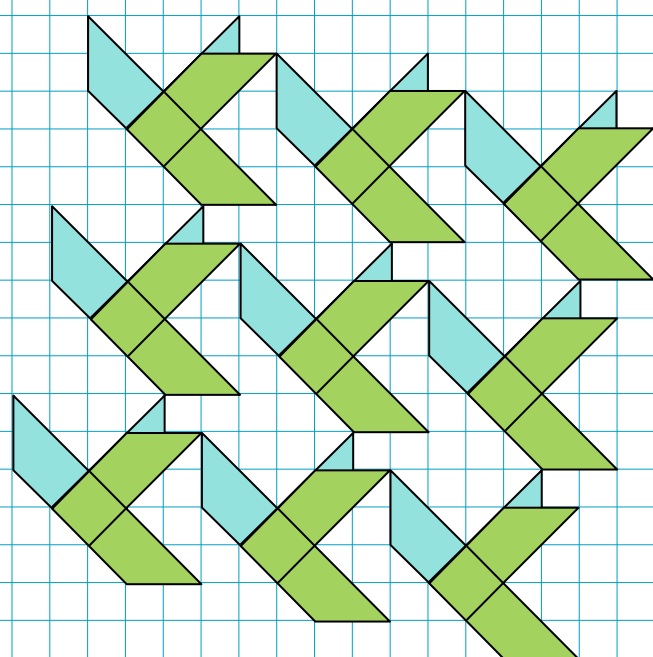
D1= 



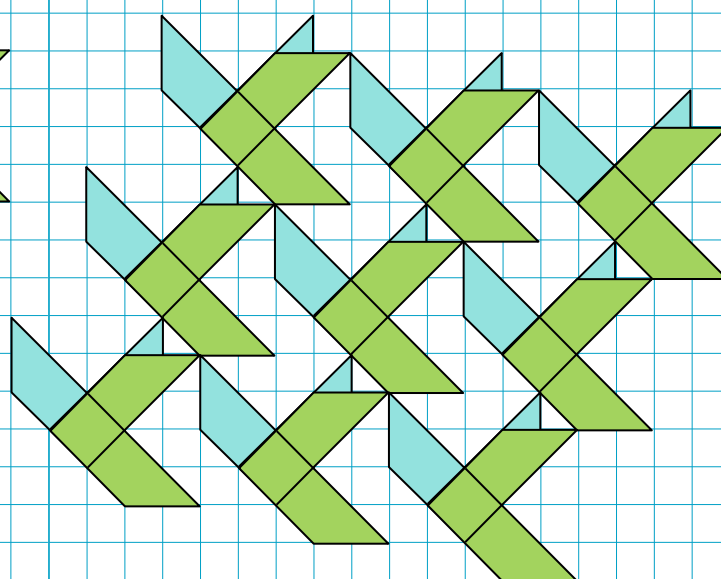
D1-1



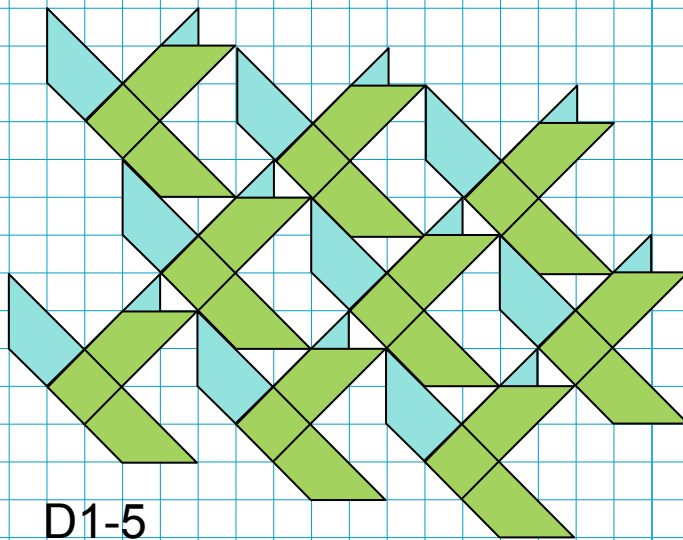
D1-2



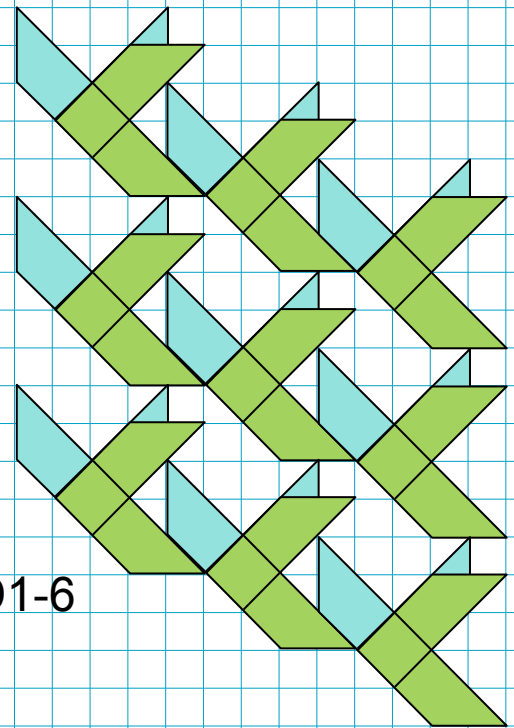
D1-3



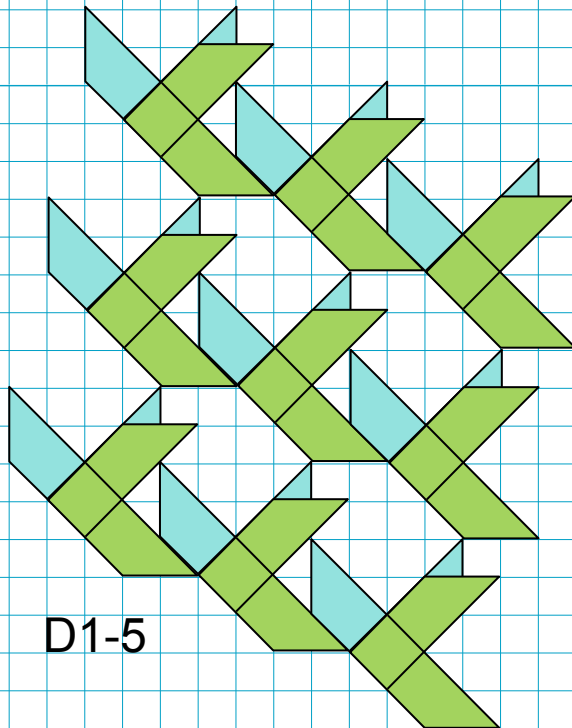
D1-4



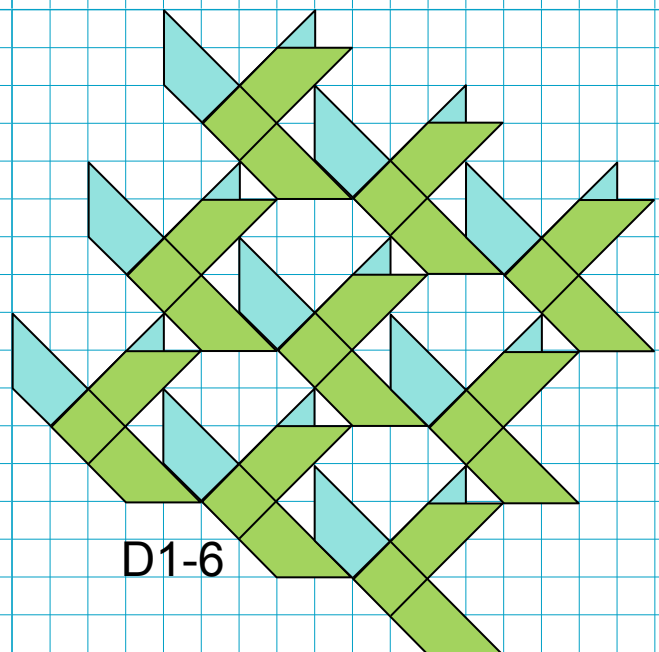
D1-5



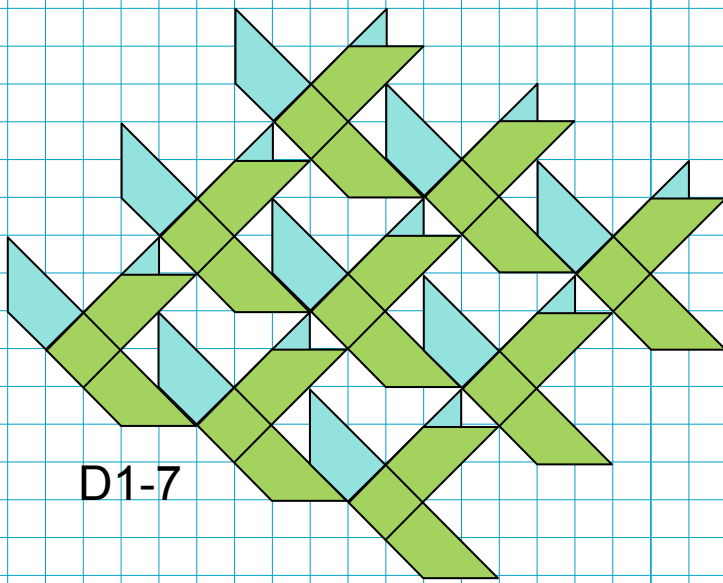
D1-6



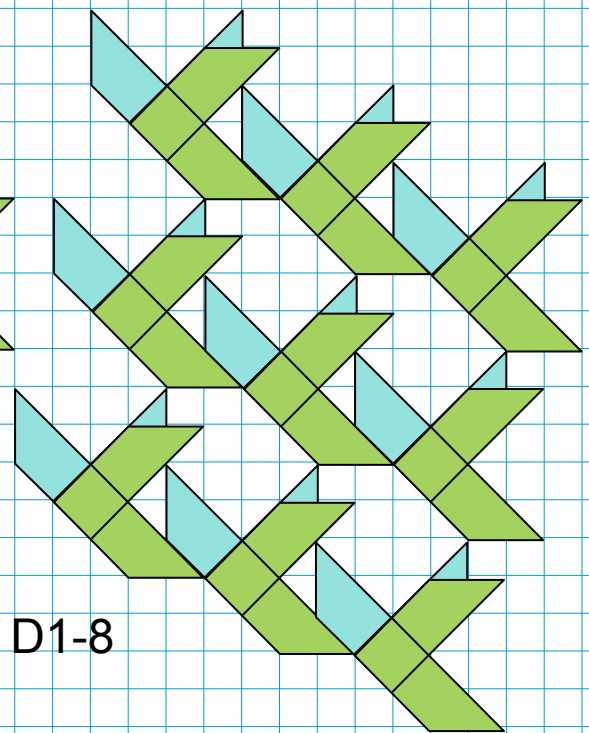
D1-5



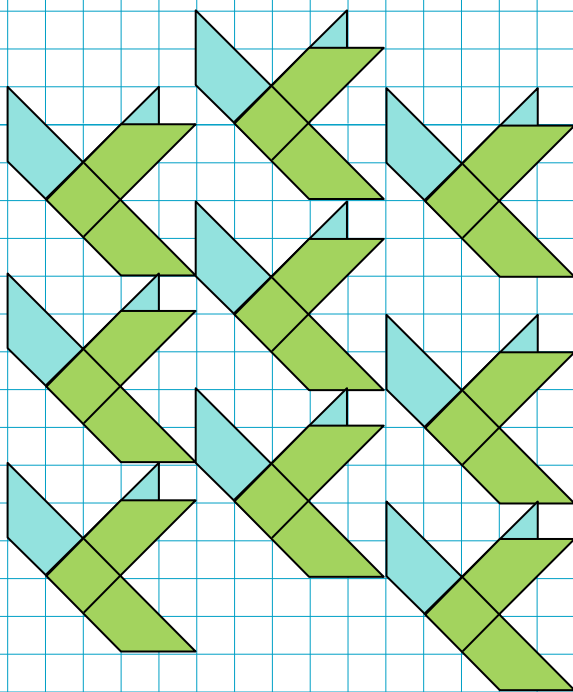
D1-6



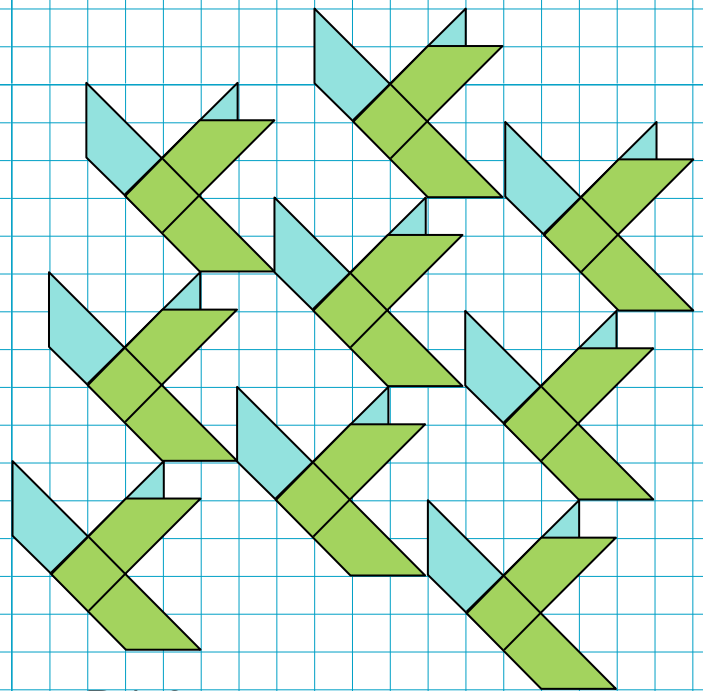
D1-7



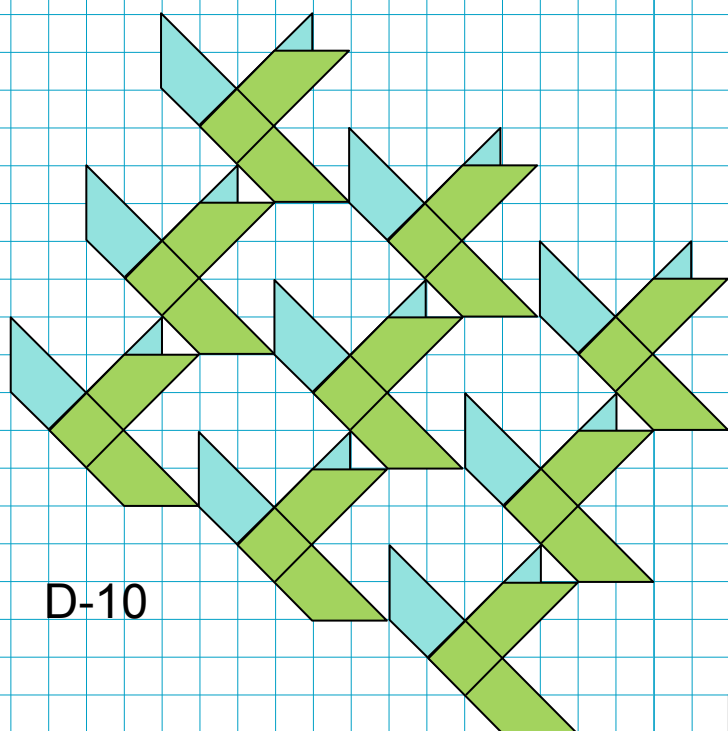
D1-8



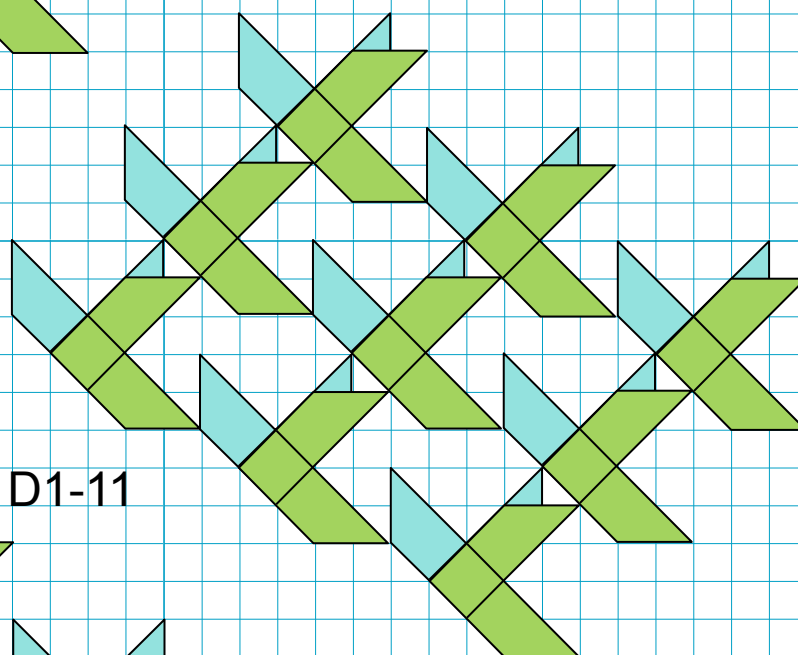
D1-9



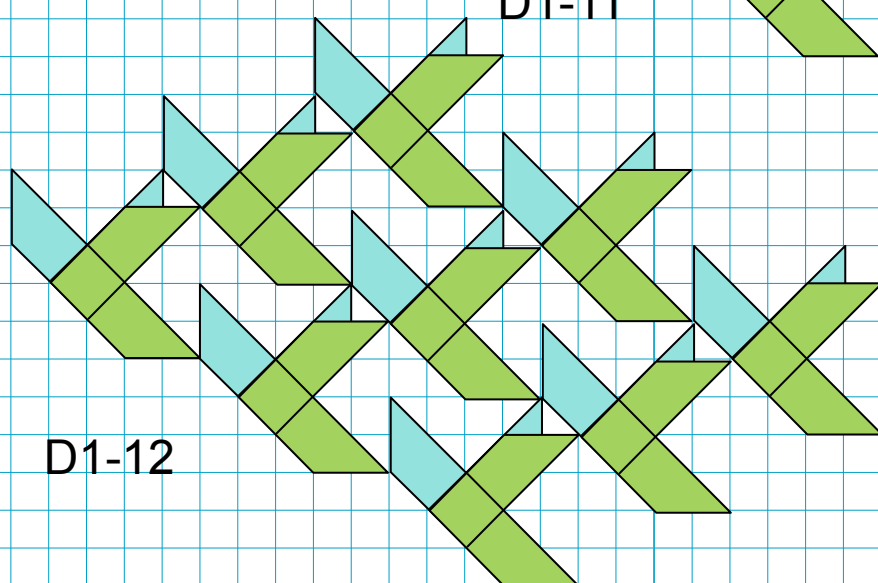
D1-9



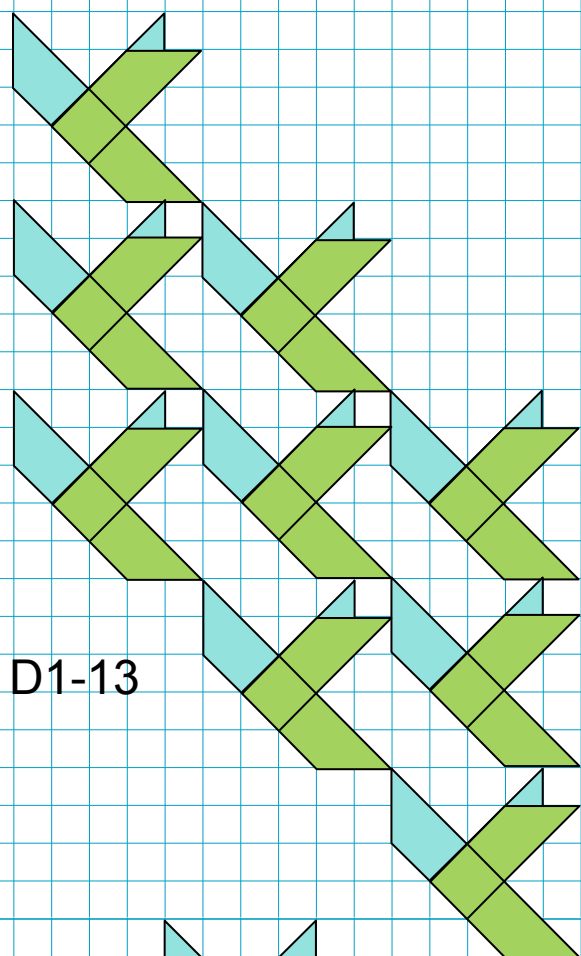
D-10



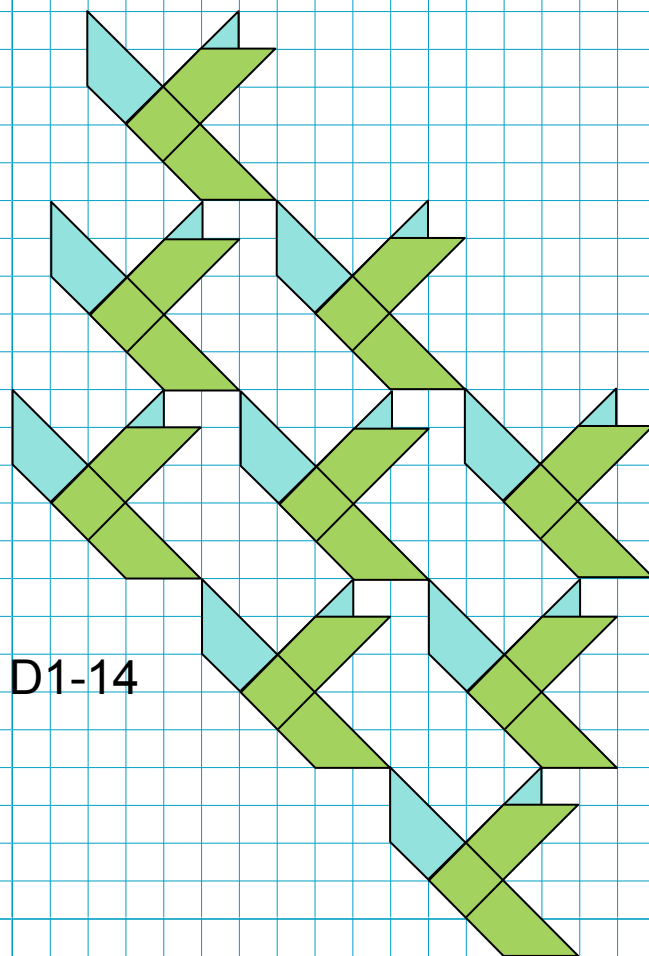
D1-11



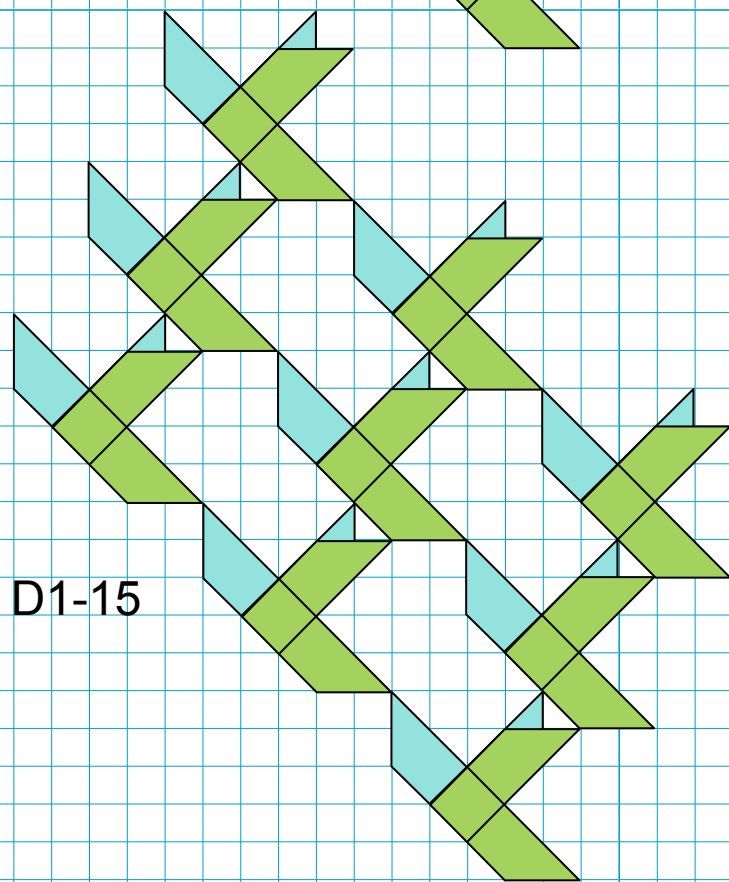
D1-12



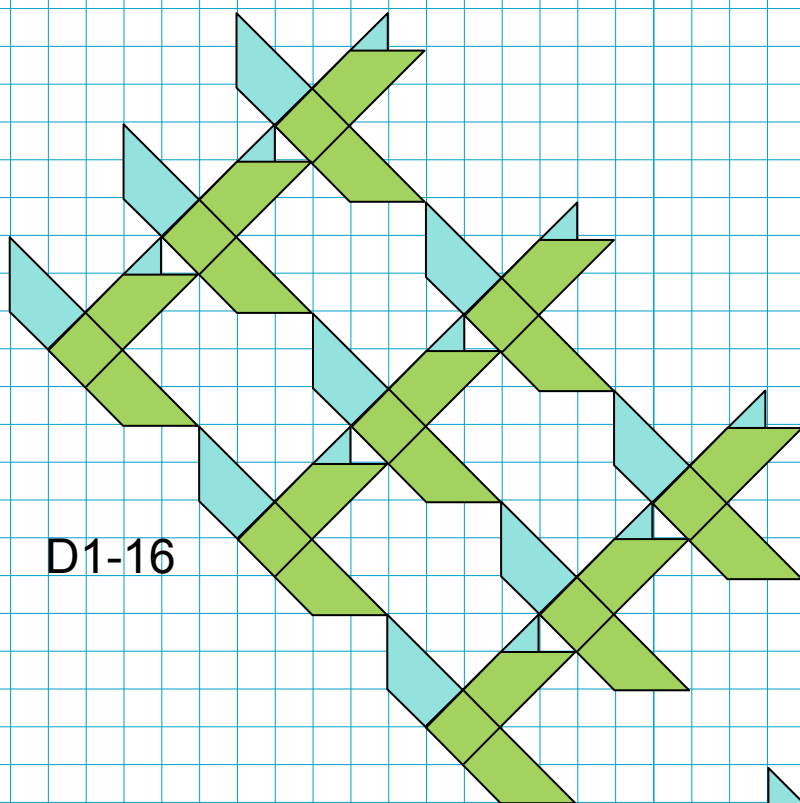
D1-13



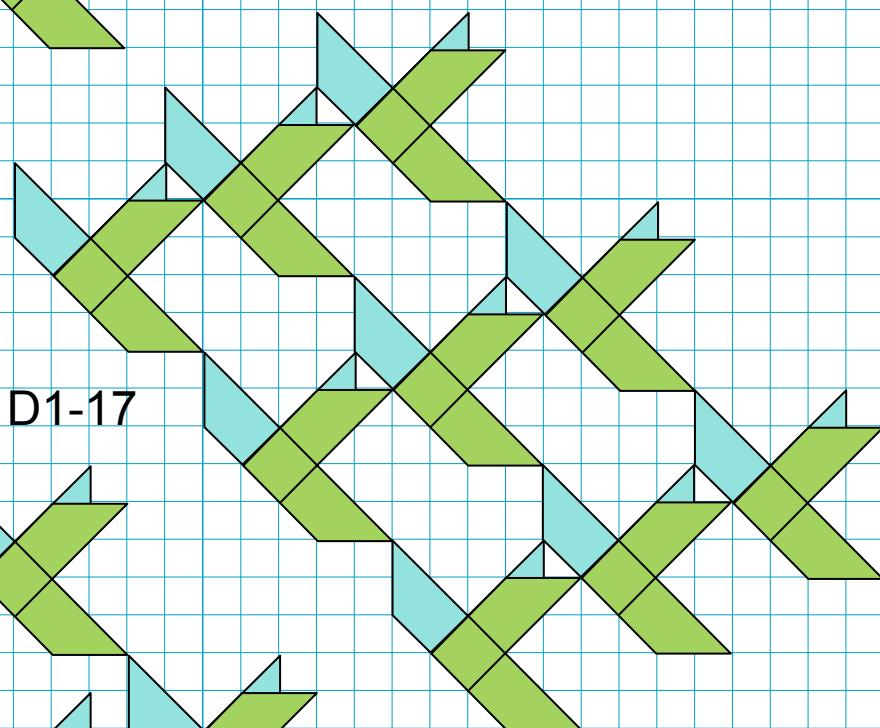
D1-14



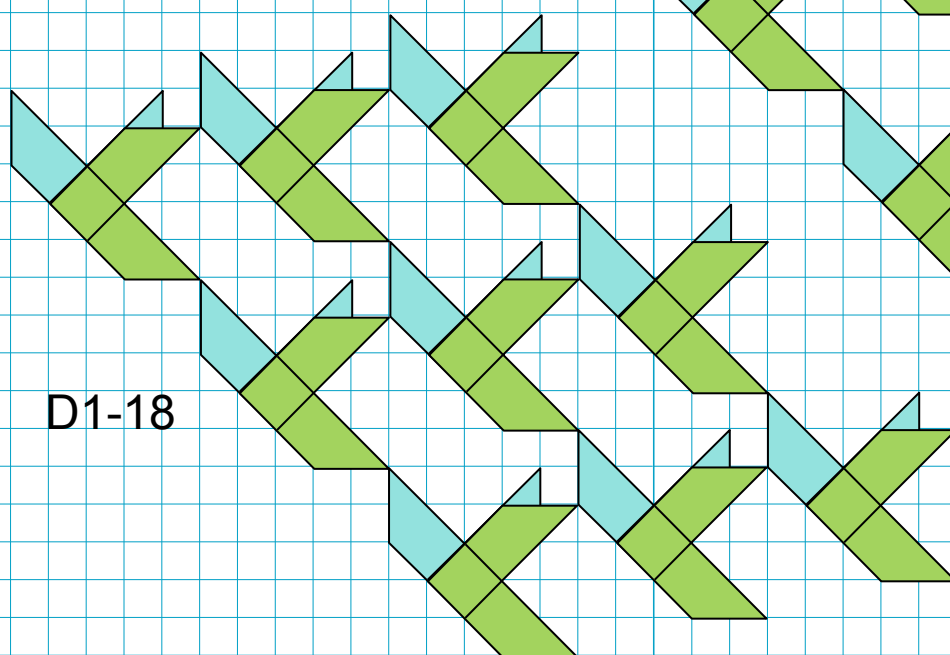
D1-15



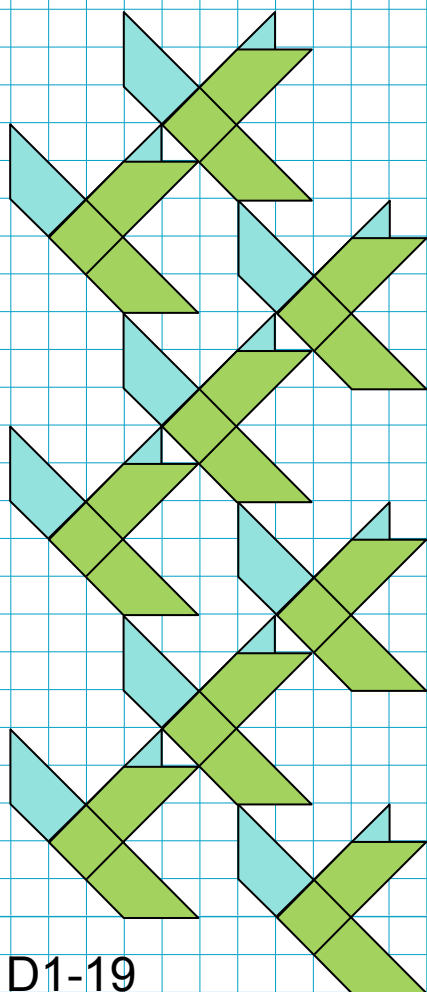
D1-16



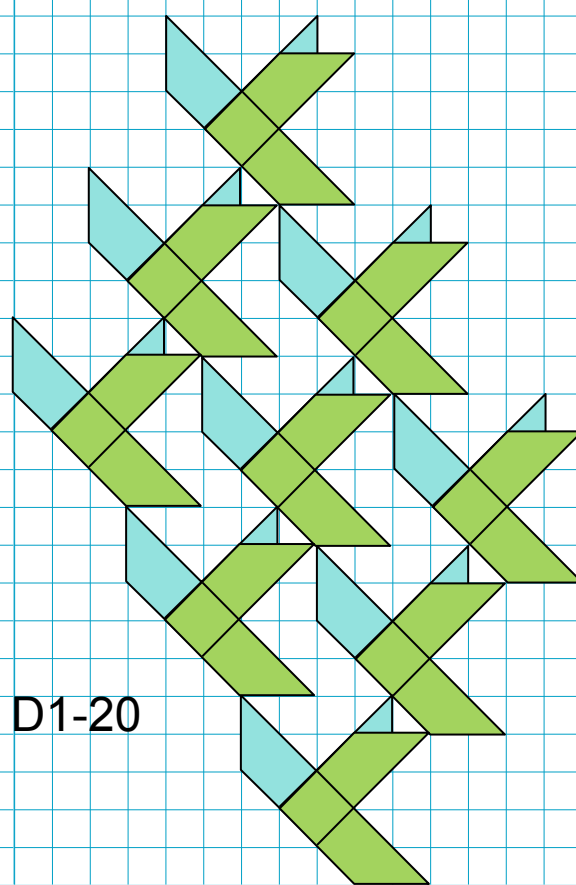
D1-17



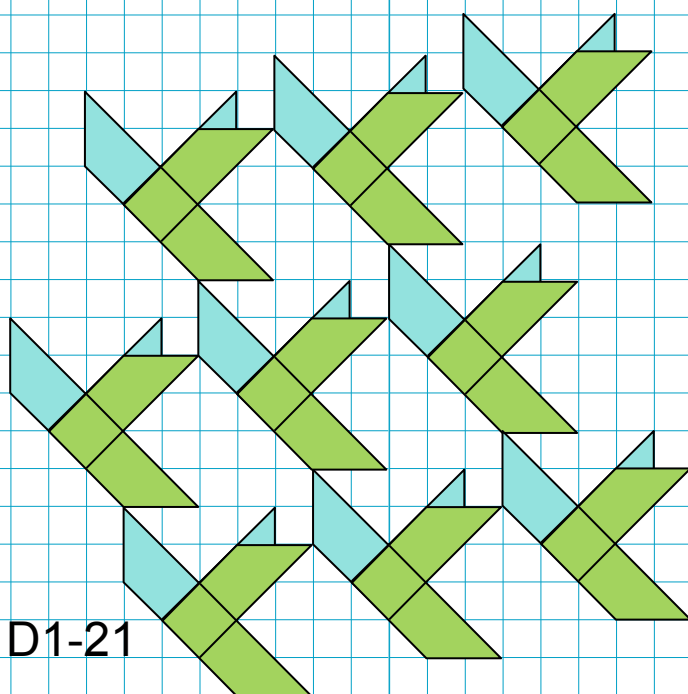
D1-18



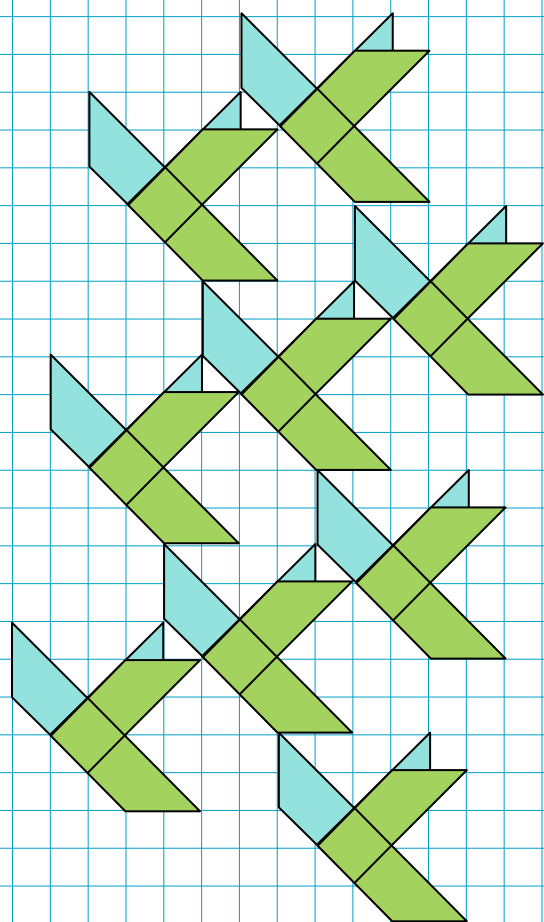
D1-19



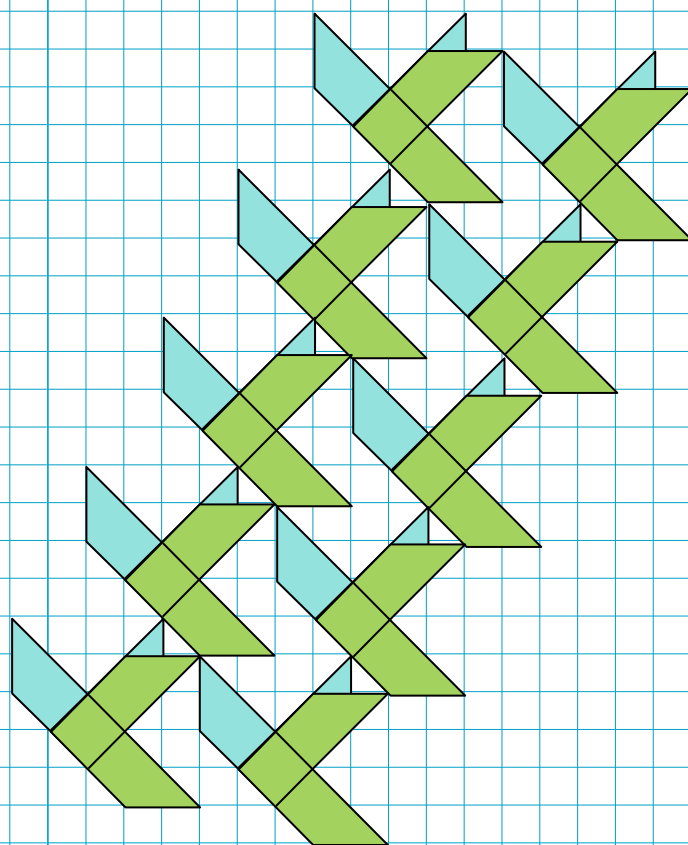
D1-20



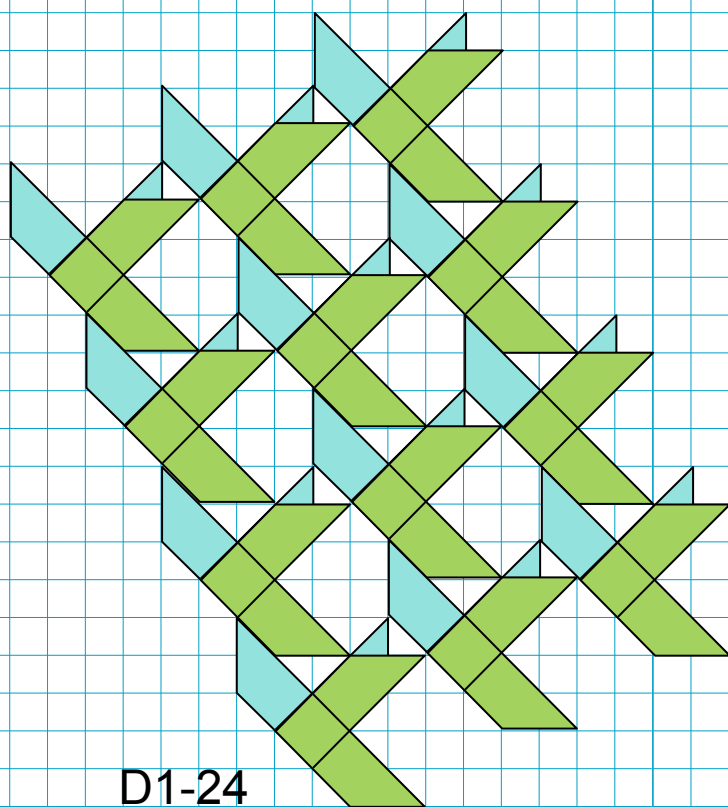
D1-21



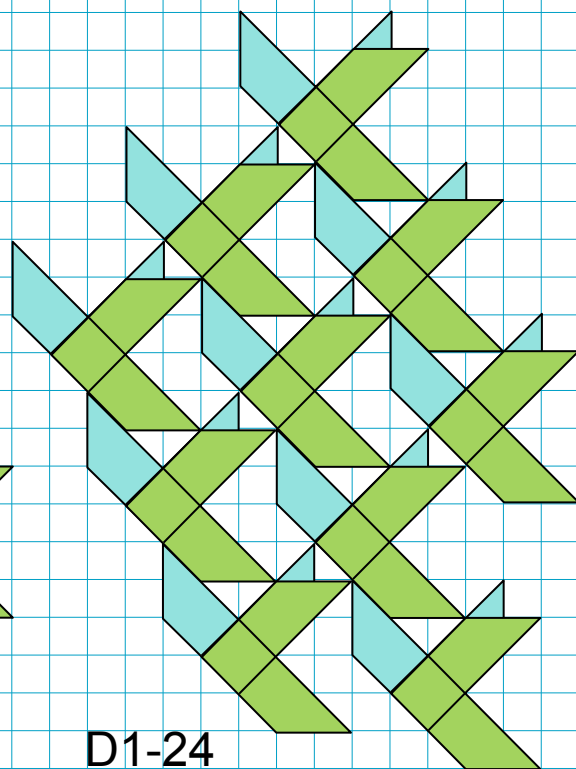
D1-22



D1-23



D1-24



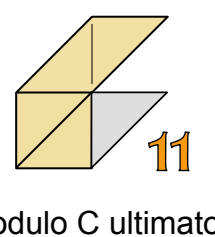
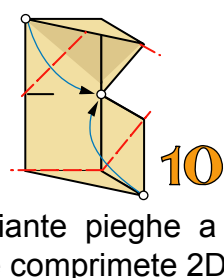
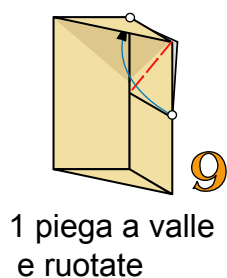
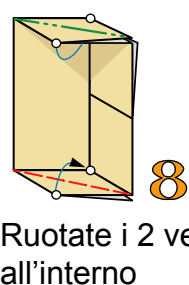
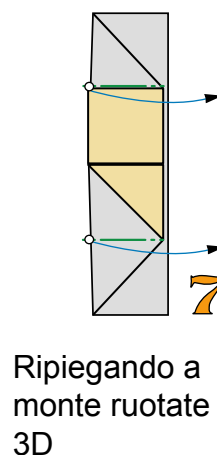
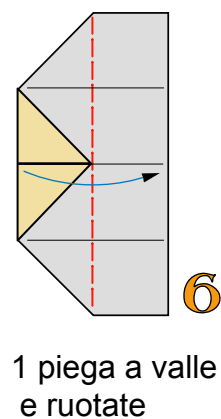
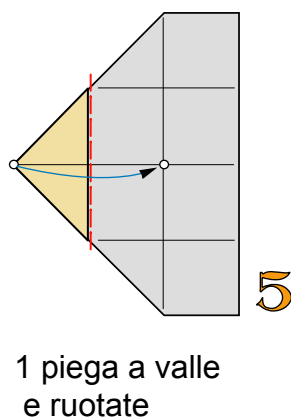
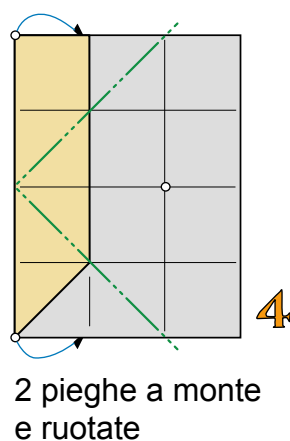
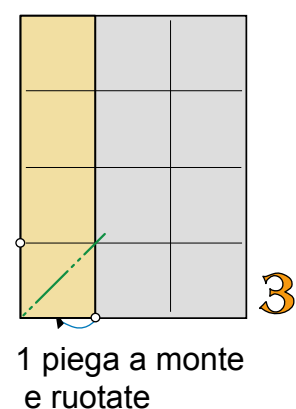
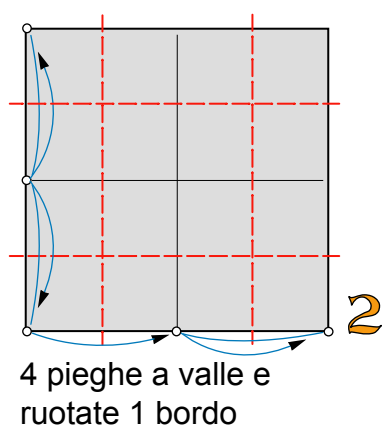
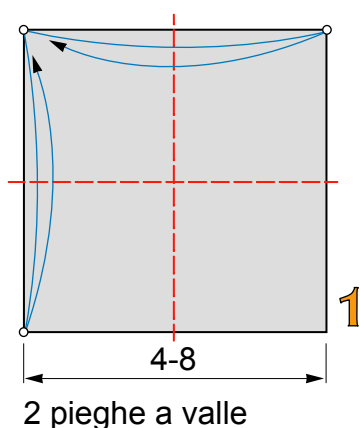
D1-24

MODULO "C"

Per questo modulo ho eseguito aggregazioni di tipo A1, A2, A3, A4.

Per chi ne avesse voglia, è possibile proseguire con tutte le altre tipologie d'intervento.

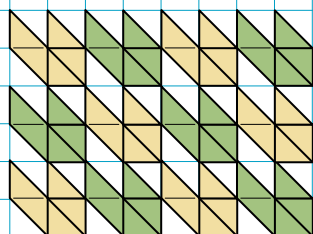
Adoperate fogli quadrati monocolori, di colore differente, di 4-8 cm di lato.



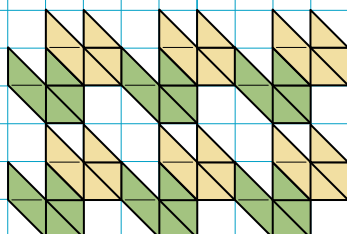
L - COMPOSIZIONI MODULARI

A= 2 MODULI BASE

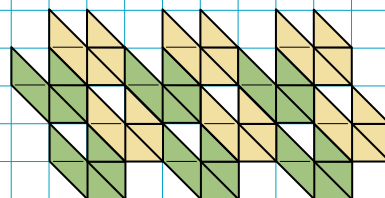
$$A1 = \begin{array}{|c|c|} \hline \text{Yellow} & \text{Green} \\ \hline \end{array} + \begin{array}{|c|c|} \hline \text{Green} & \text{Yellow} \\ \hline \end{array}$$



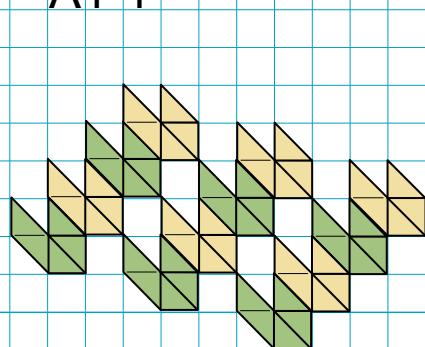
A1-1



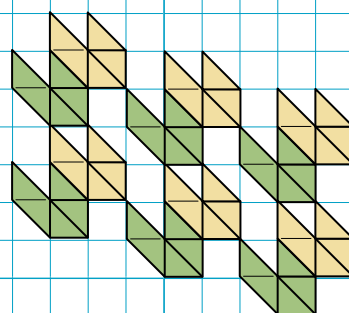
A1-2



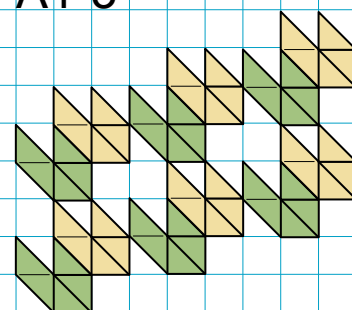
A1-3



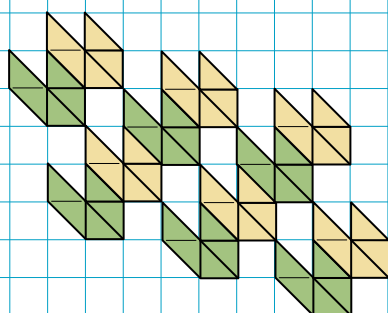
A1-4



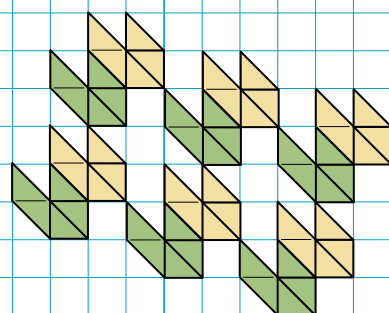
A1-5



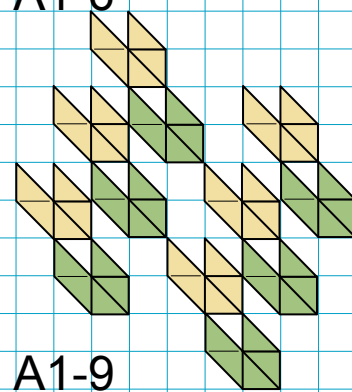
A1-6



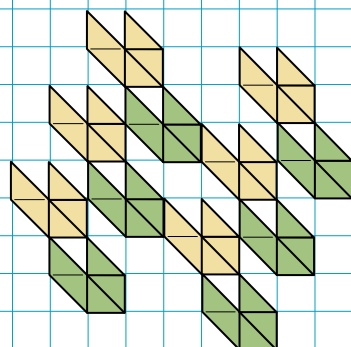
A1-7



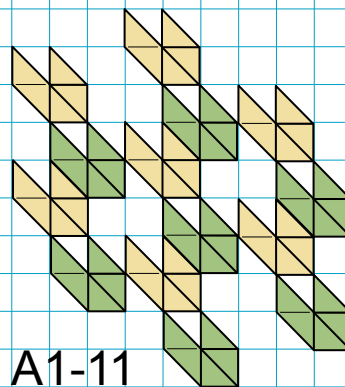
A1-8



A1-9

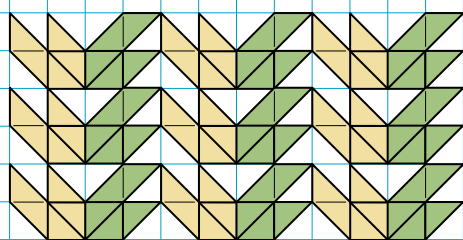


A1-10

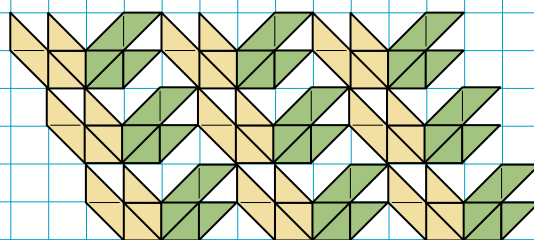


A1-11

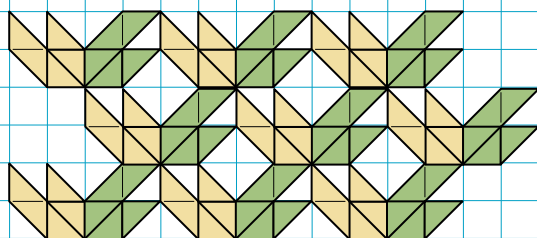
$$A2 = \text{yellow triangle} + \text{green triangle}$$



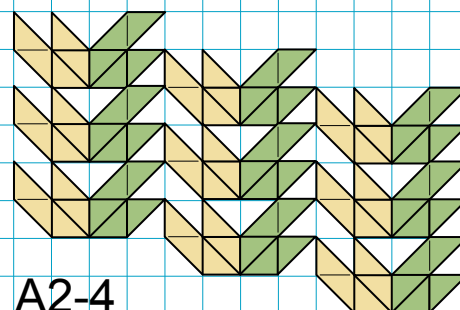
A2-1



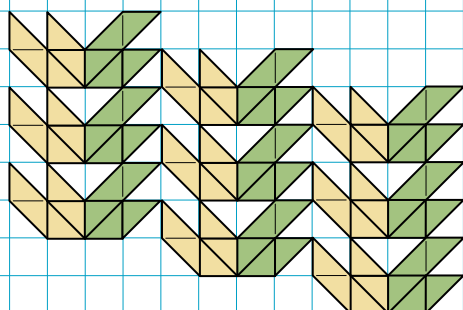
A2-2



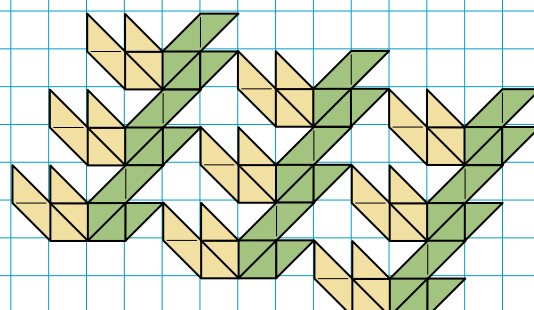
A2-3



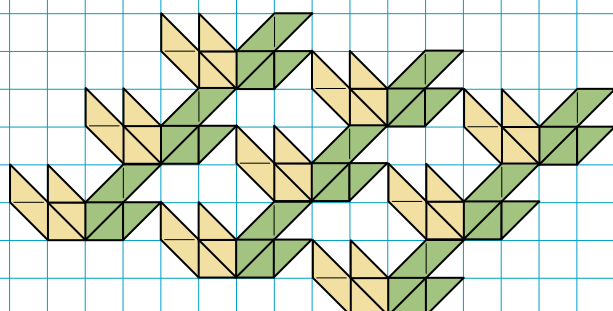
A2-4



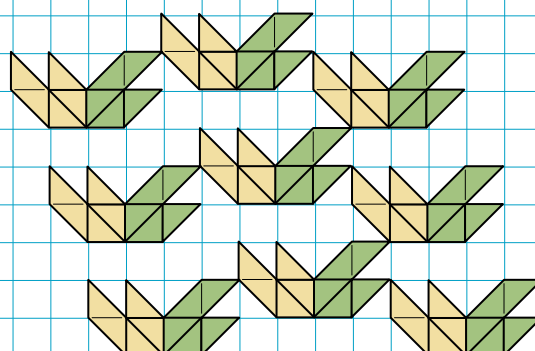
A2-5



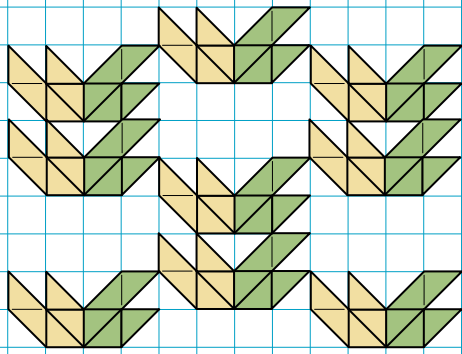
A2-6



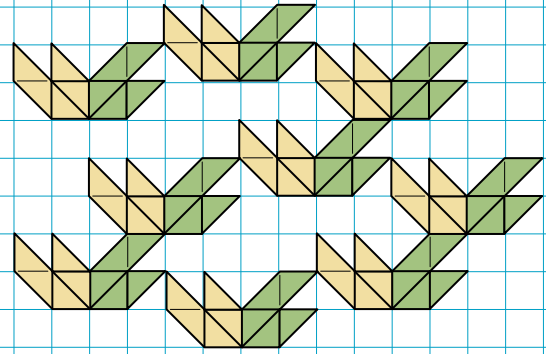
A2-7



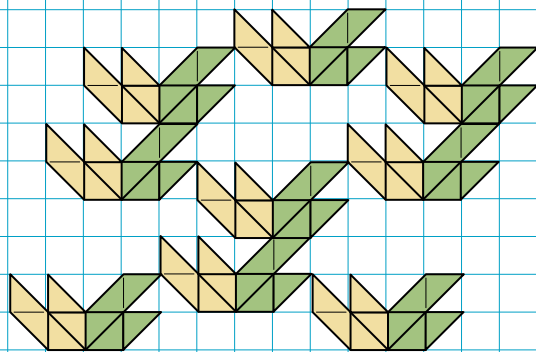
A2-8



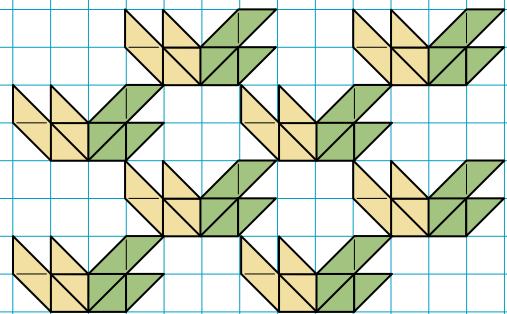
A2-9



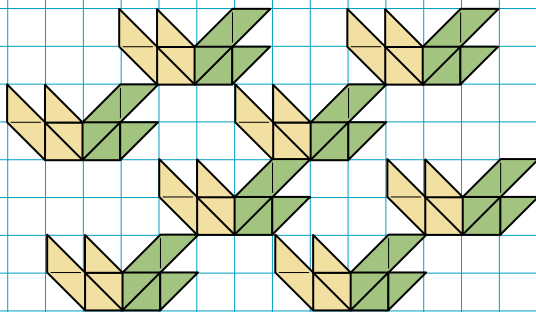
A2-10



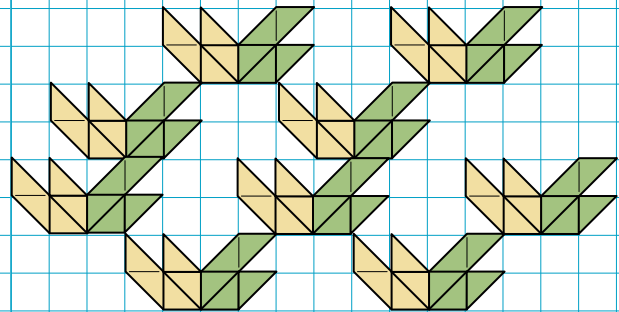
A2-11



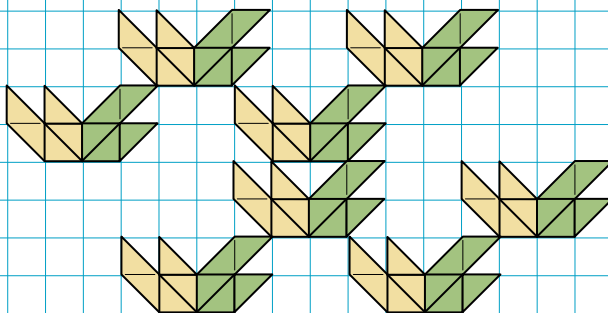
A2-12



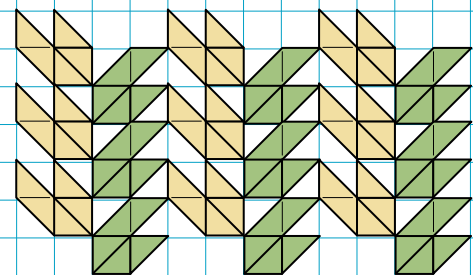
A2-13



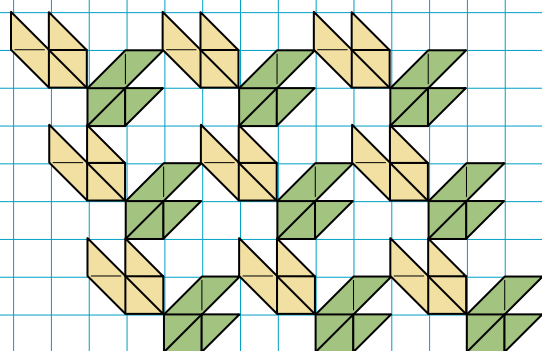
A2-14



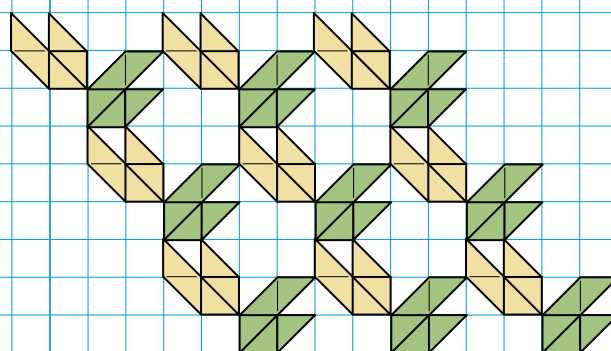
A2-15



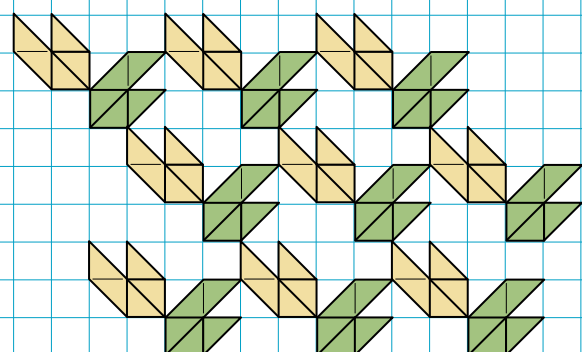
A2-16



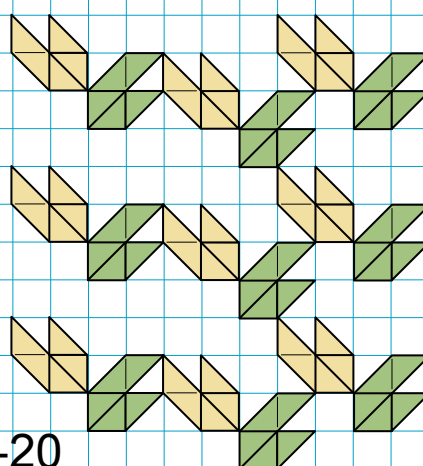
A2-17



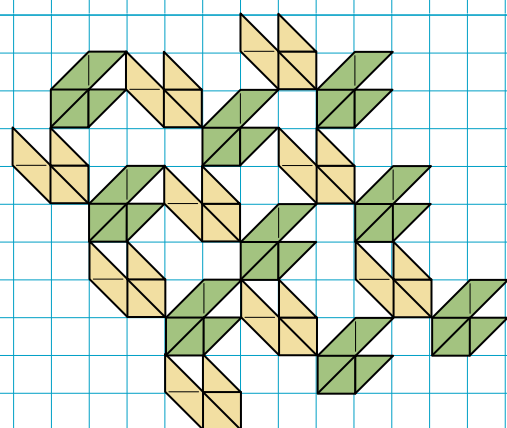
A2-18



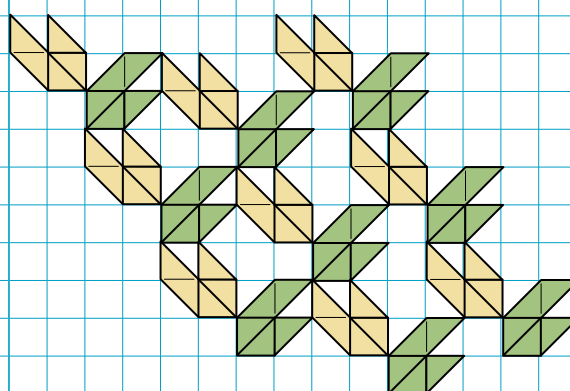
A2-19



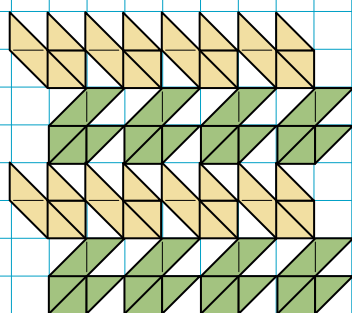
A2-20



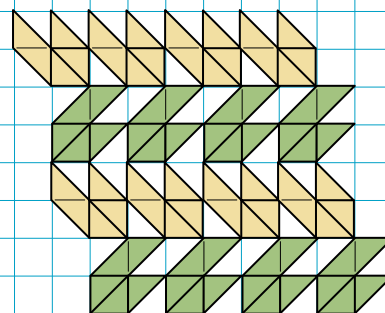
A2-21



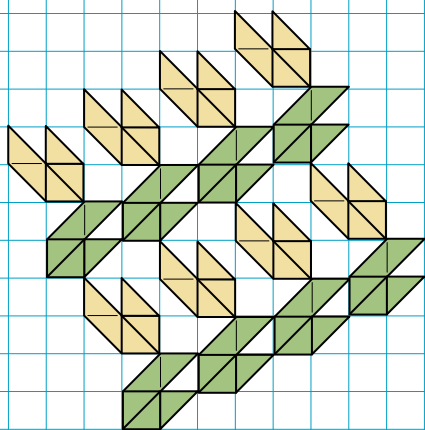
A2-22



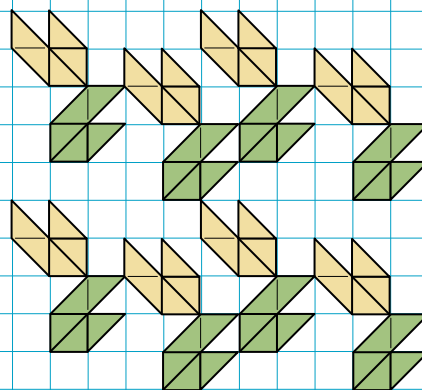
A2-23



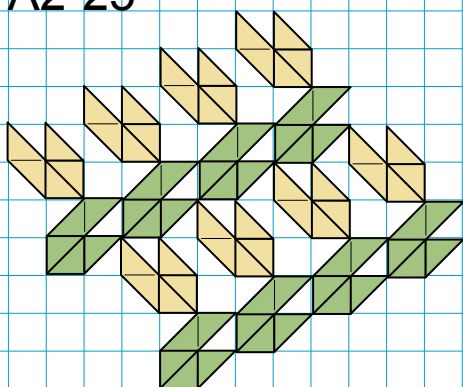
A2-24



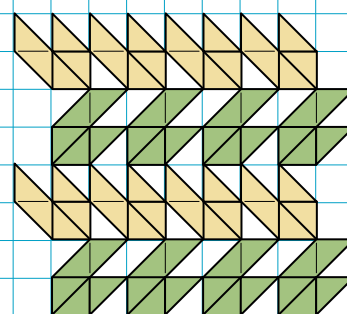
A2-25



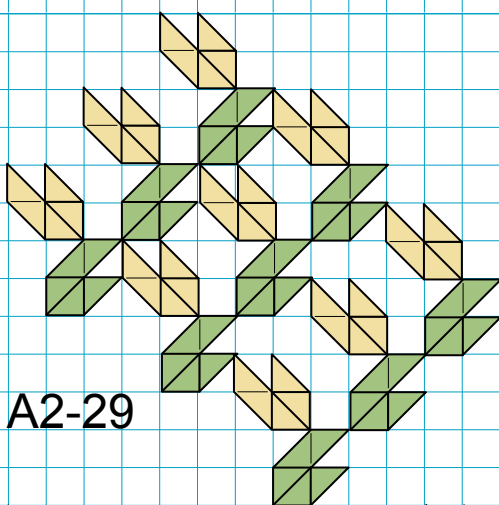
A2-26



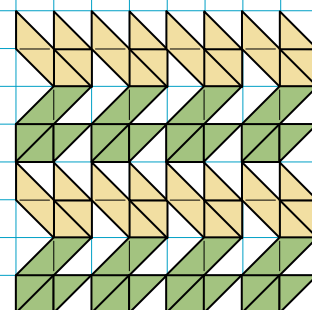
A2-27



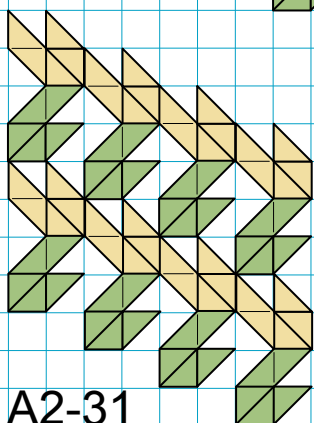
A2-28



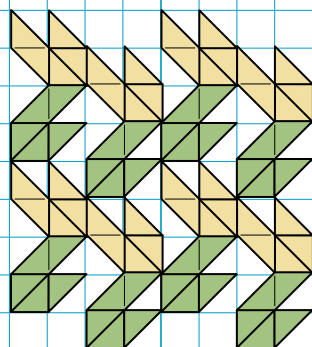
A2-29



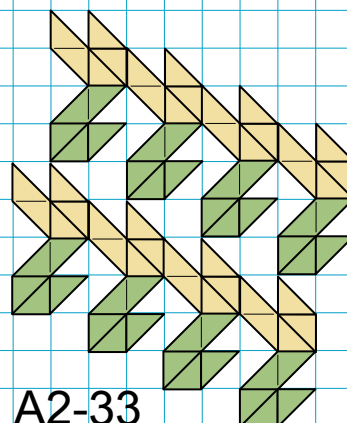
A2-30



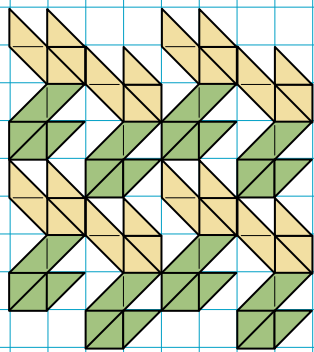
A2-31



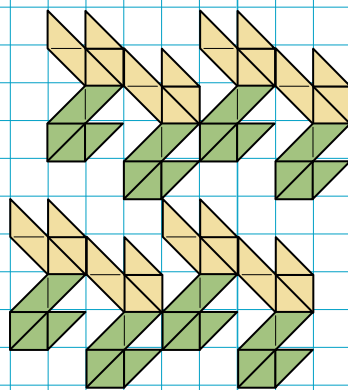
A2-32



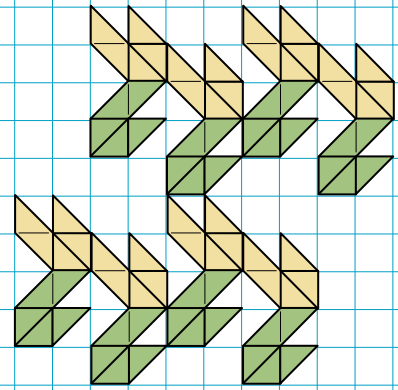
A2-33



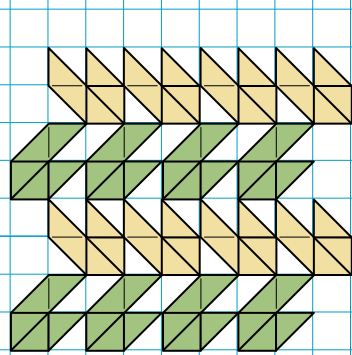
A2-34



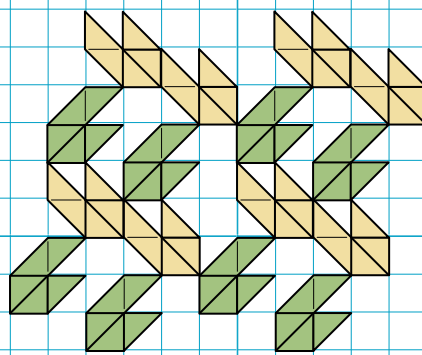
A2-35



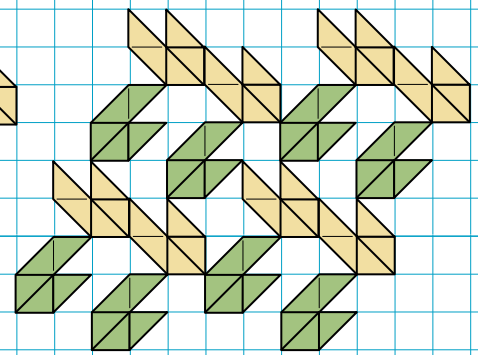
A2-36



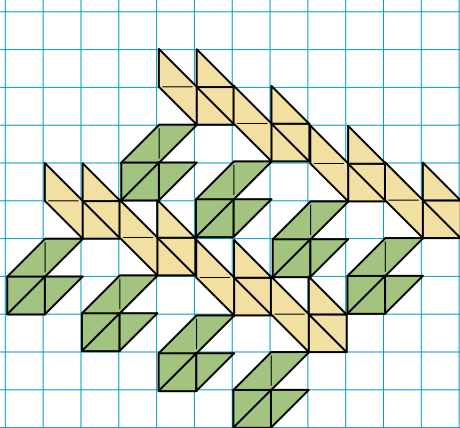
A2-37



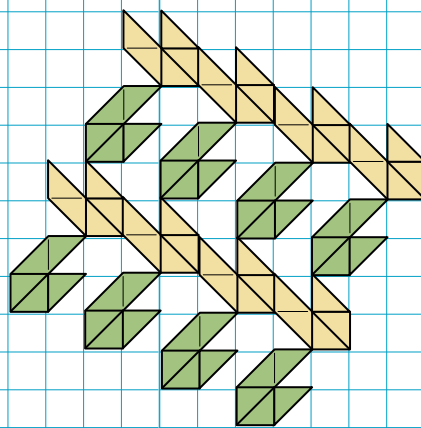
A2-38



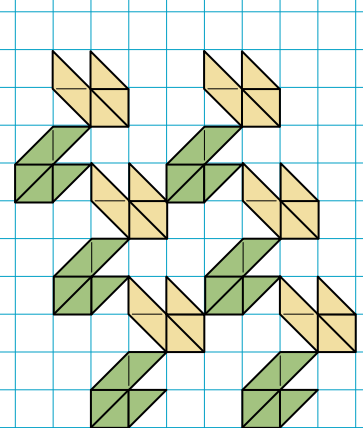
A2-39



A2-40

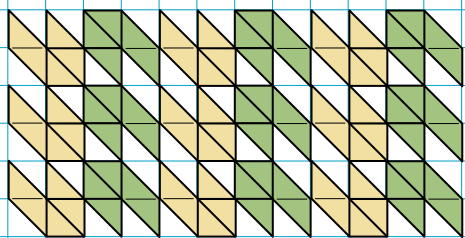


A2-41

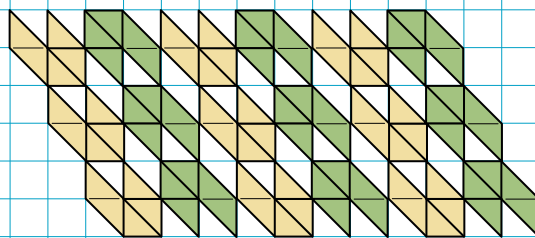


A2-42

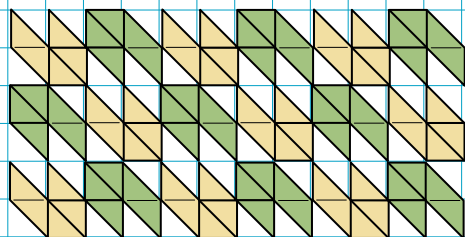
$$A3 = \text{yellow triangle} + \text{green triangle}$$



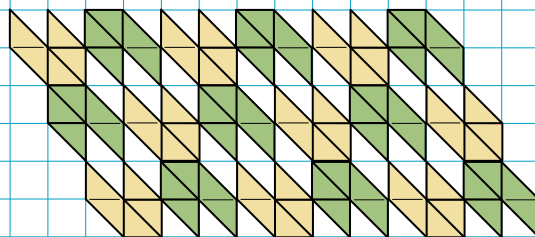
A3-1



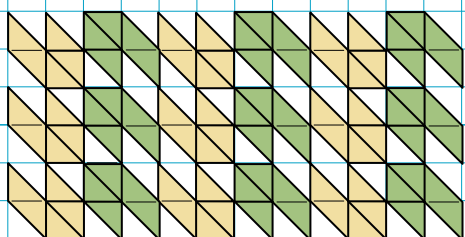
A3-2



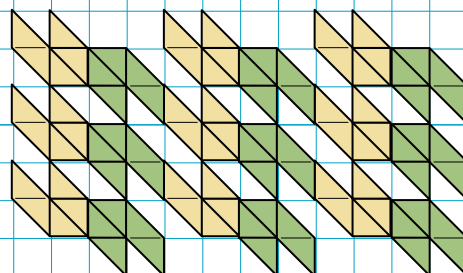
A3-3



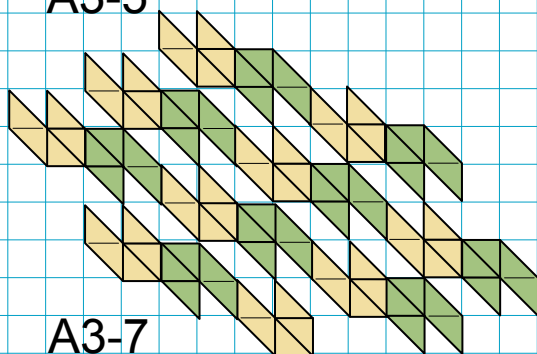
A3-4



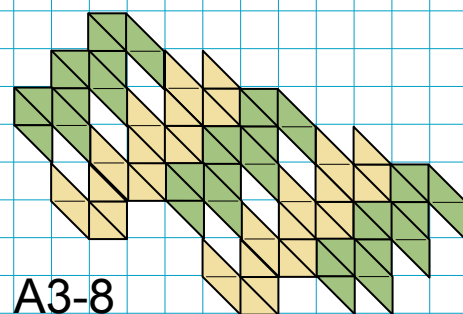
A3-5



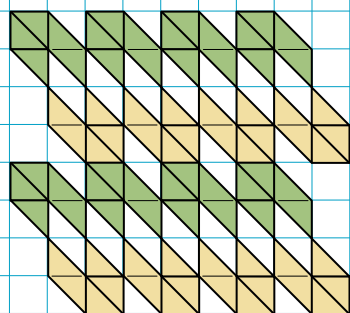
A3-6



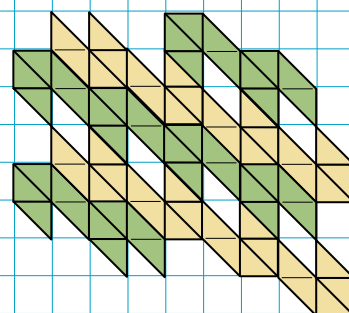
A3-7



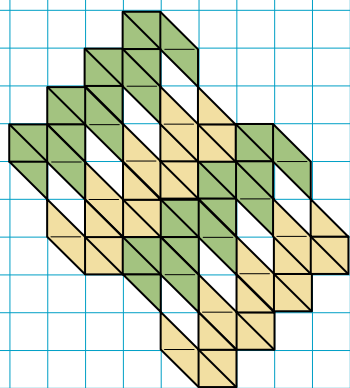
A3-8



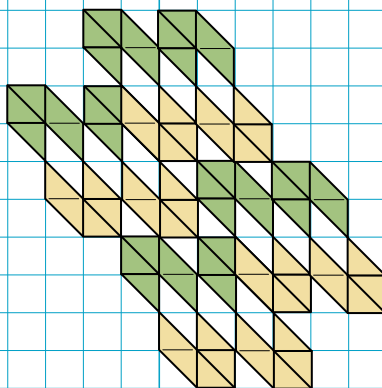
A3-9



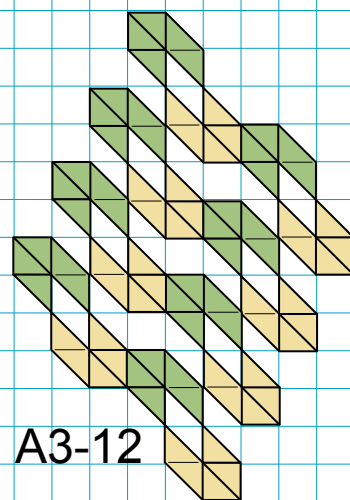
A3-9



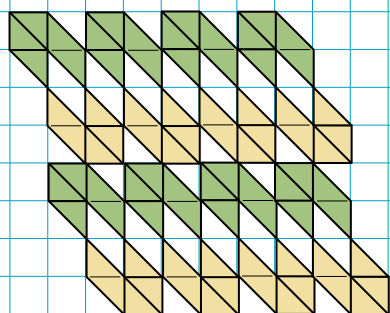
A3-10



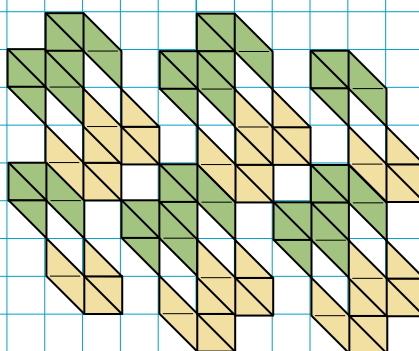
A3-11



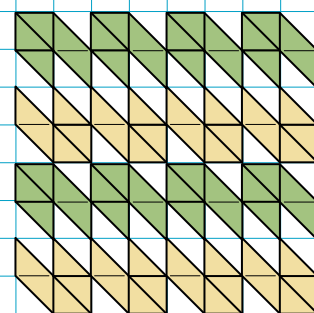
A3-12



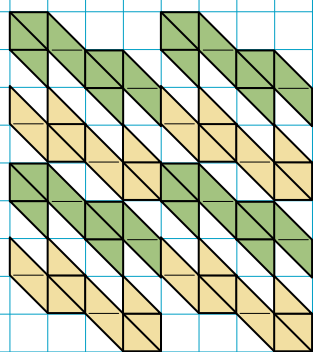
A3-13



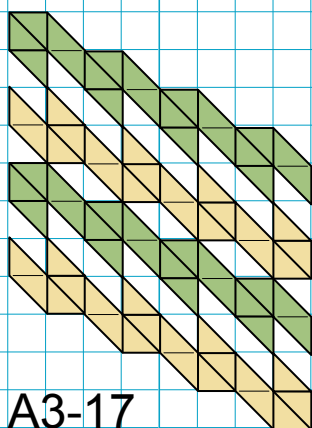
A3-14



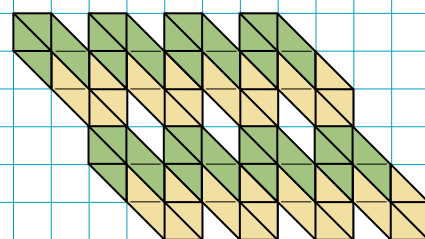
A3-15



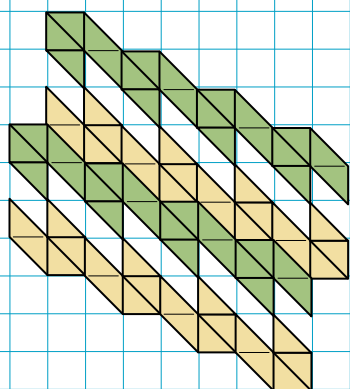
A3-16



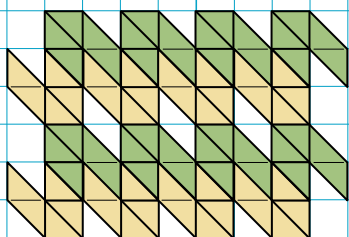
A3-17



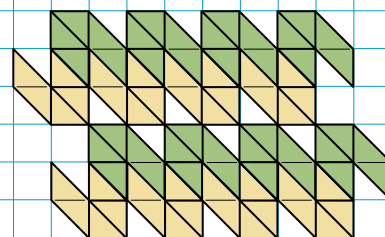
A3-18



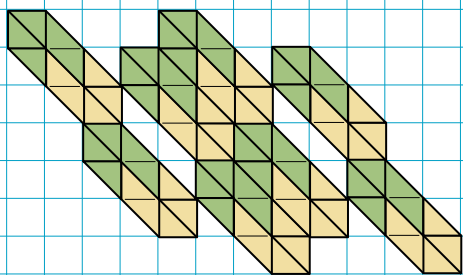
A3-19



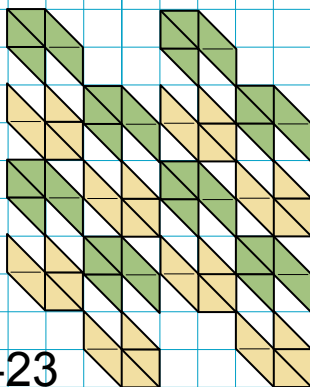
A3-20



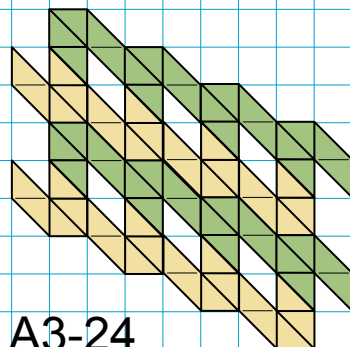
A3-21



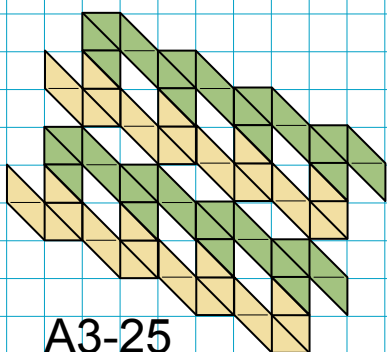
A3-22



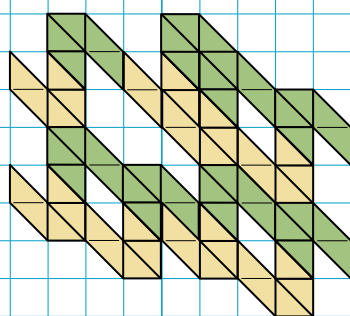
A3-23



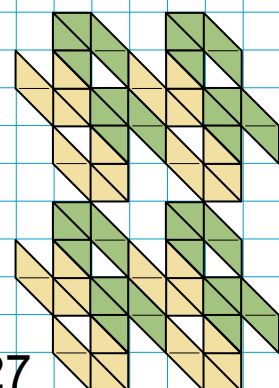
A3-24



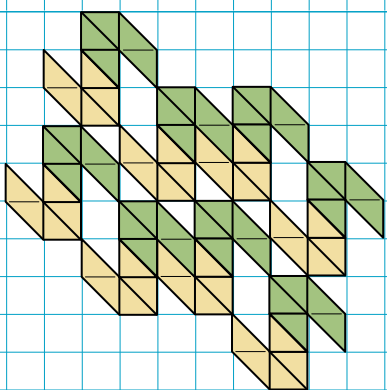
A3-25



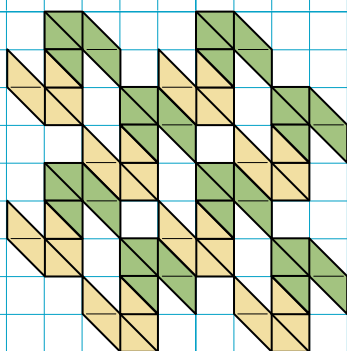
A3-26



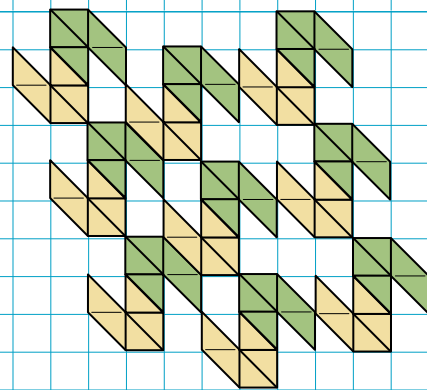
A3-27



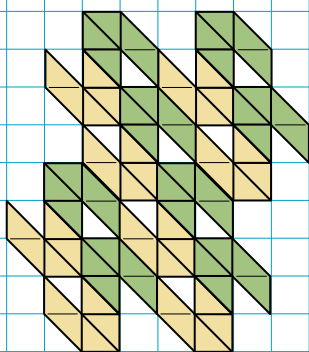
A3-28



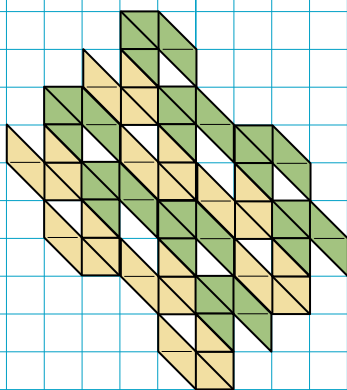
A3-29



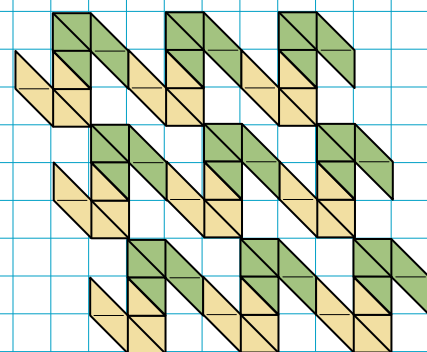
A3-30



A3-31

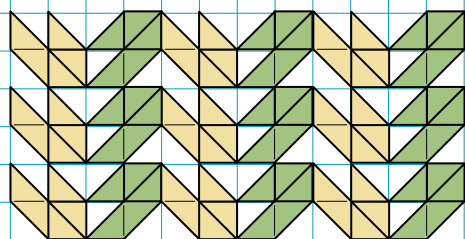


A3-32

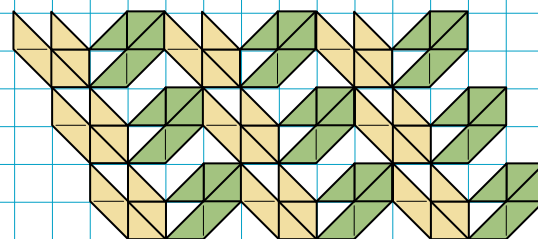


A3-33

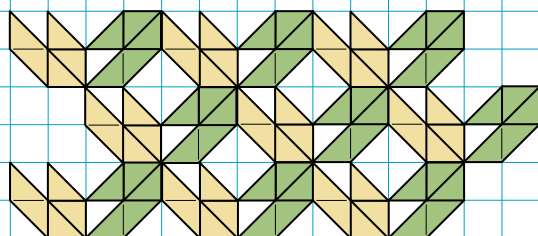
$$A4 = \text{yellow triangle} + \text{green triangle} \quad \leftarrow$$



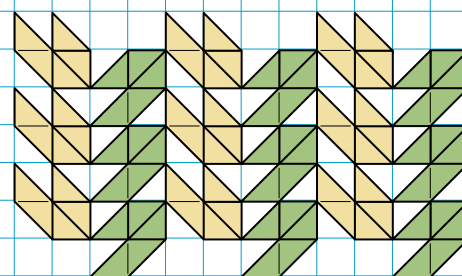
A4-1



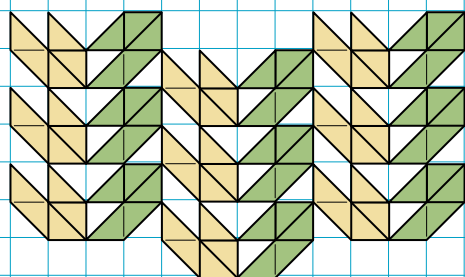
A4-2



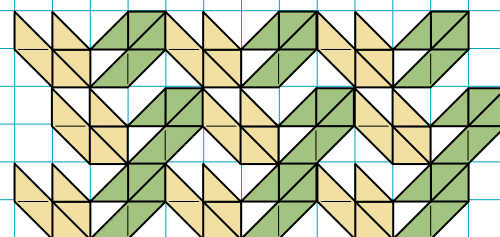
A4-3



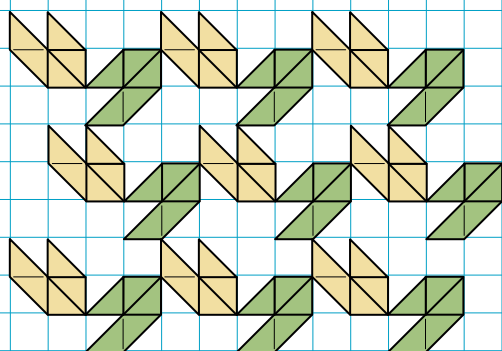
A4-4



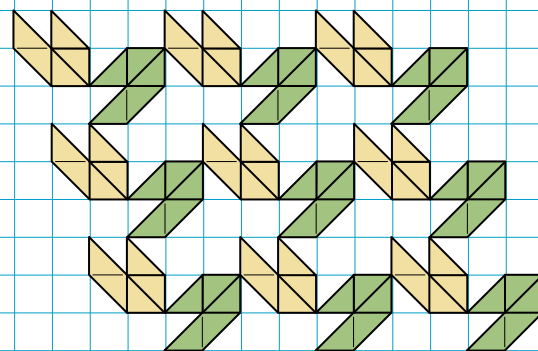
A4-5



A4-6

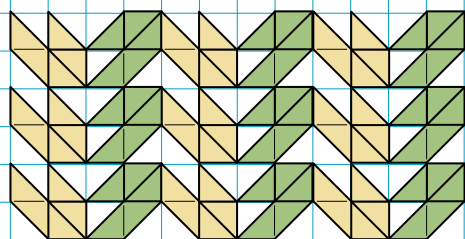


A4-7

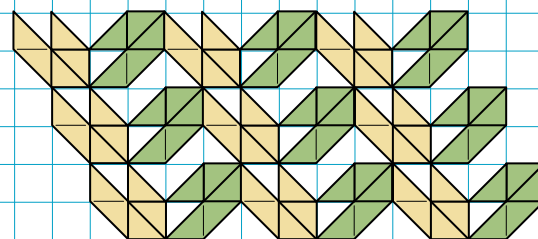


A4-8

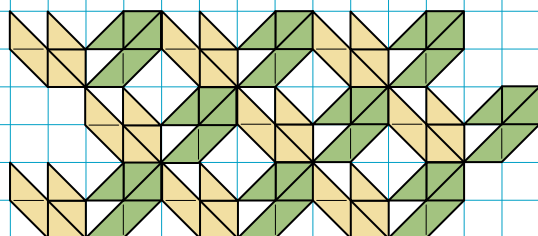
$$A4 = \text{yellow triangle} + \text{green triangle}$$



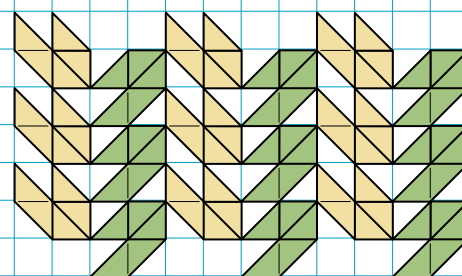
A4-1



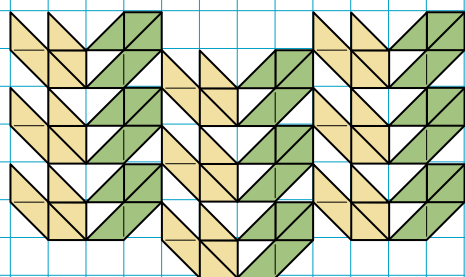
A4-2



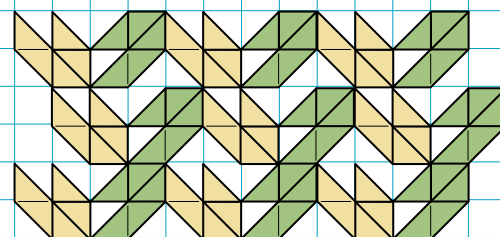
A4-3



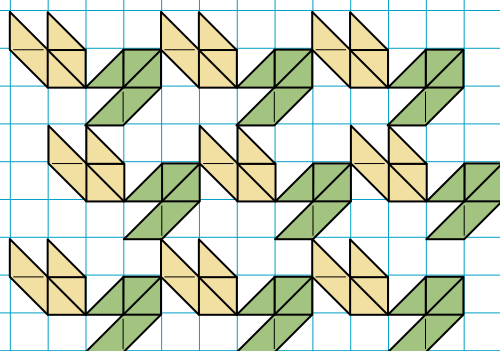
A4-4



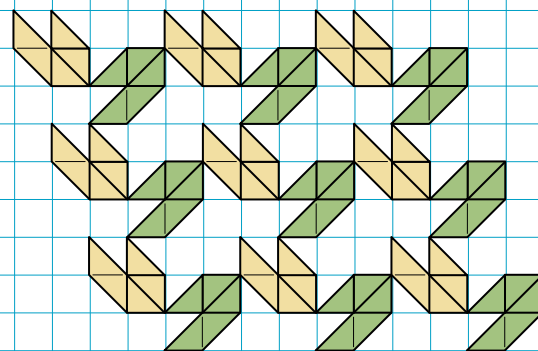
A4-5



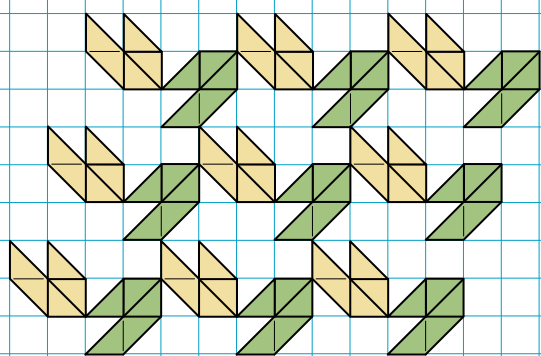
A4-6



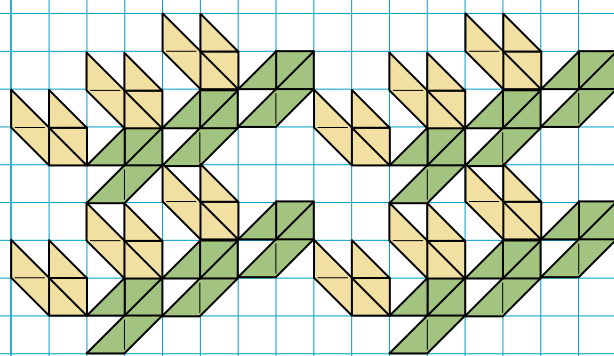
A4-7



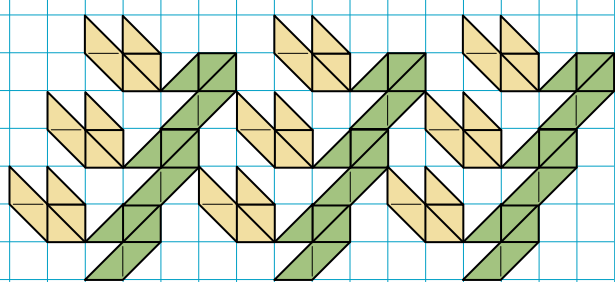
A4-8



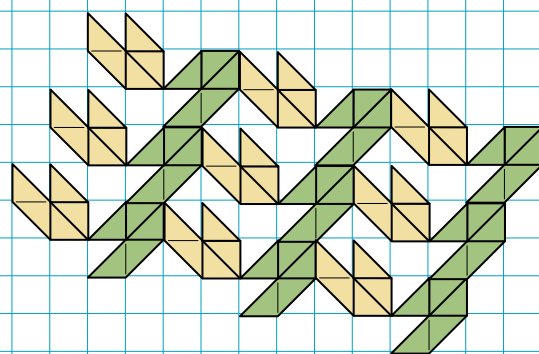
A4-9



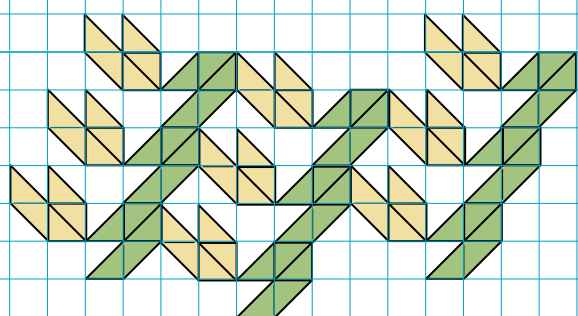
A4-10



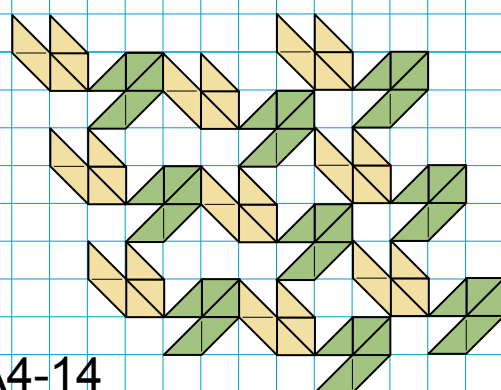
A4-11



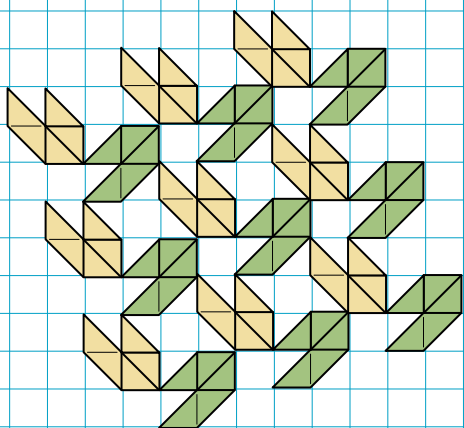
A4-12



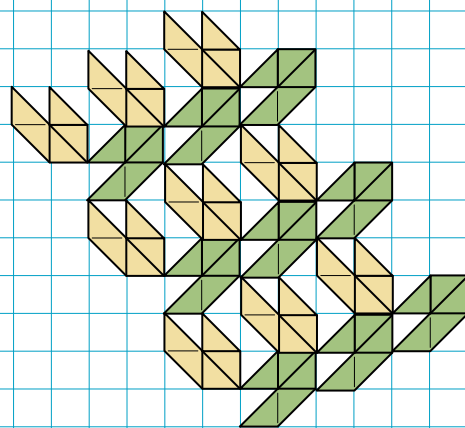
A4-13



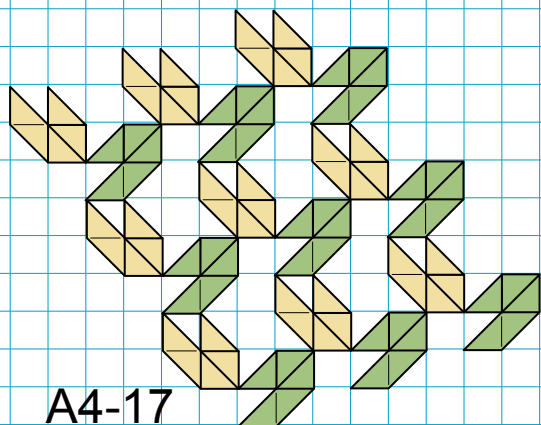
A4-14



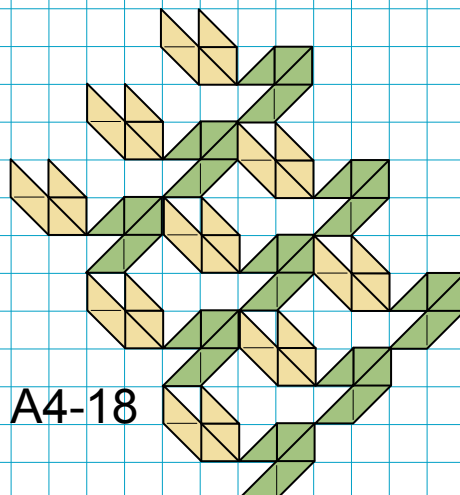
A4-15



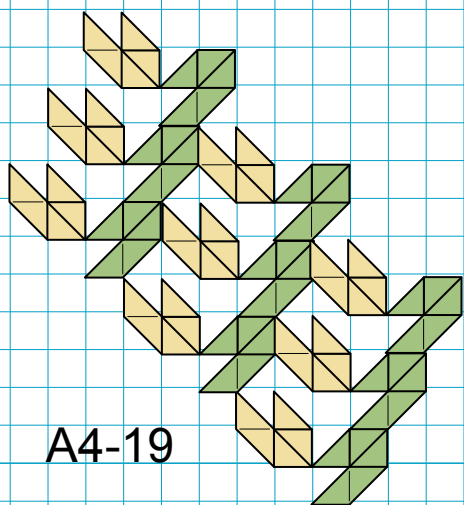
A4-16



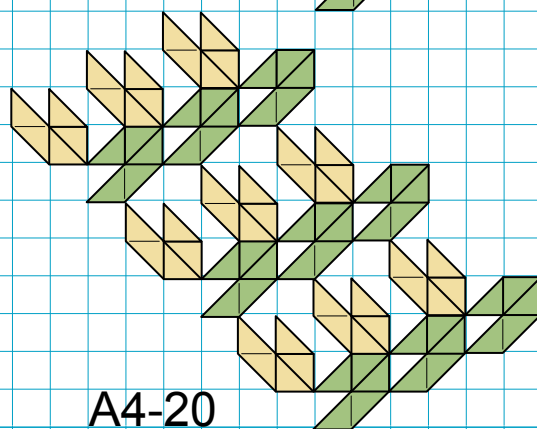
A4-17



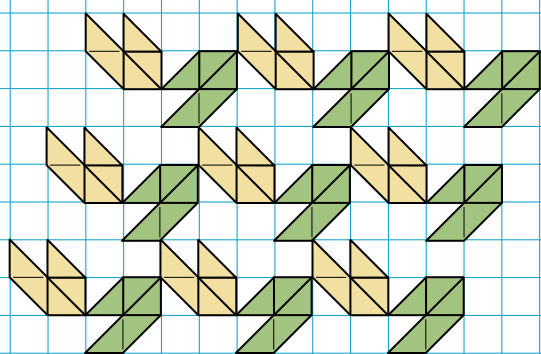
A4-18



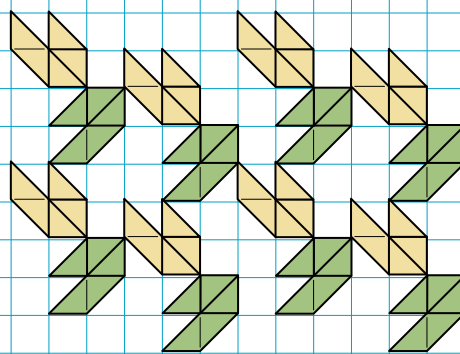
A4-19



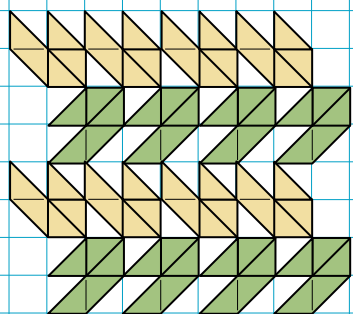
A4-20



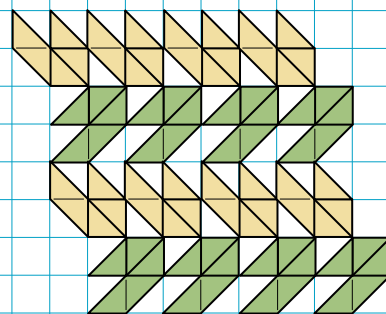
A4-21



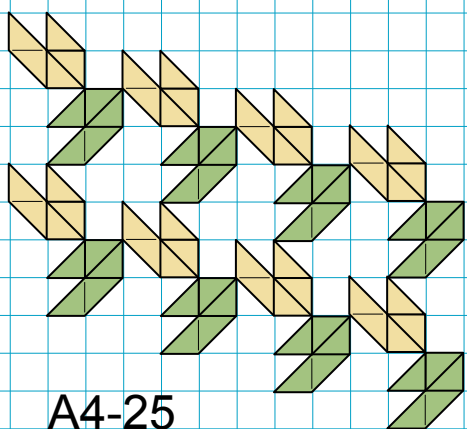
A4-22



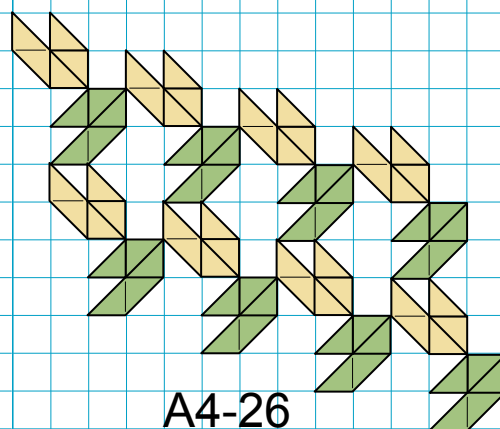
A4-23



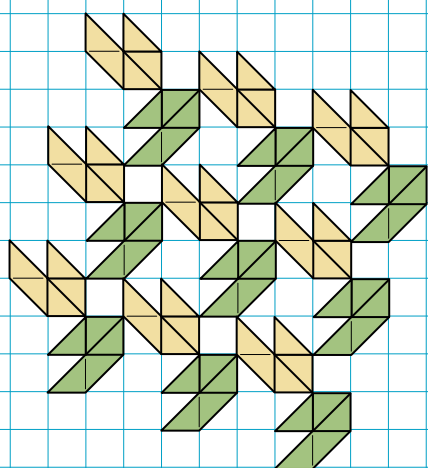
A4-24



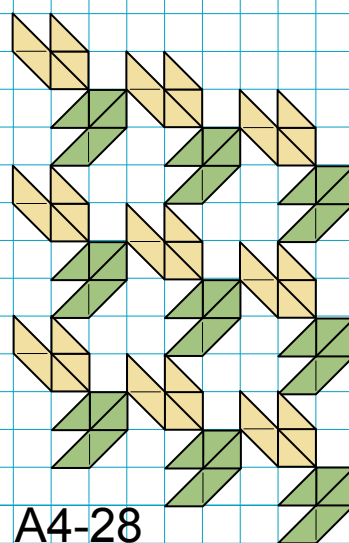
A4-25



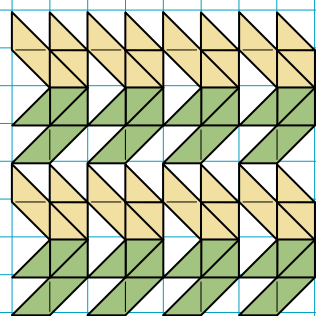
A4-26



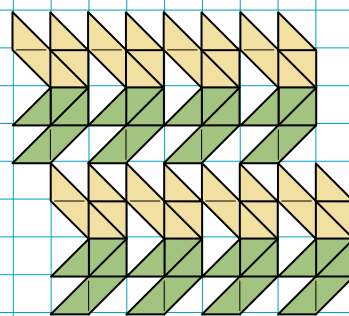
A4-27



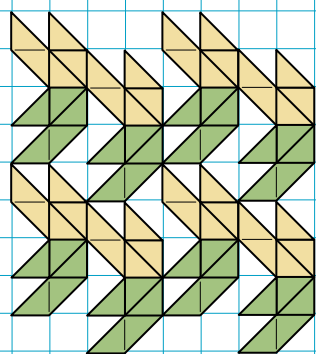
A4-28



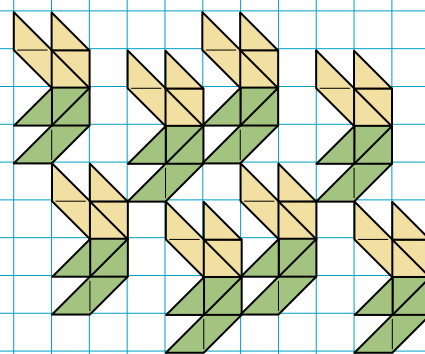
A4-29



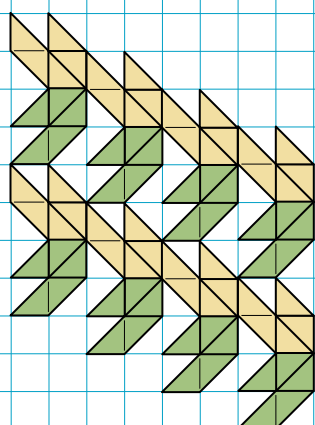
A4-30



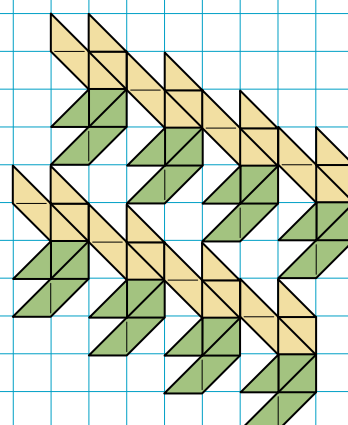
A4-31



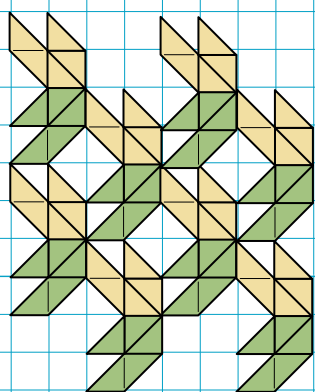
A4-32



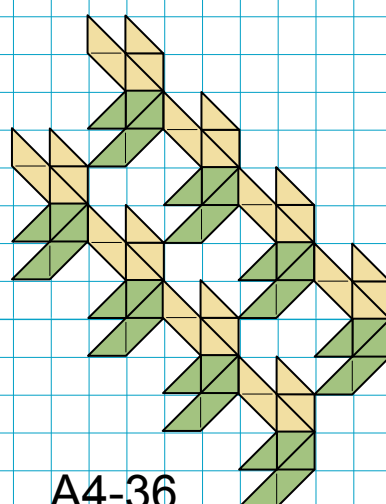
A4-33



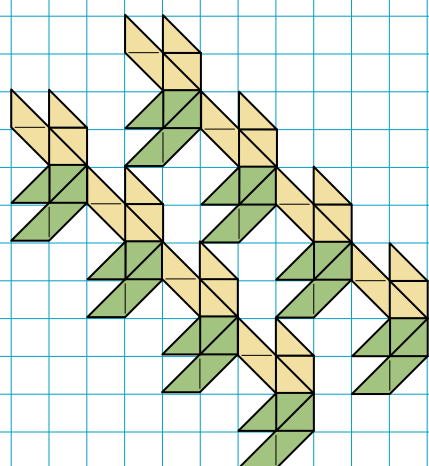
A4-34



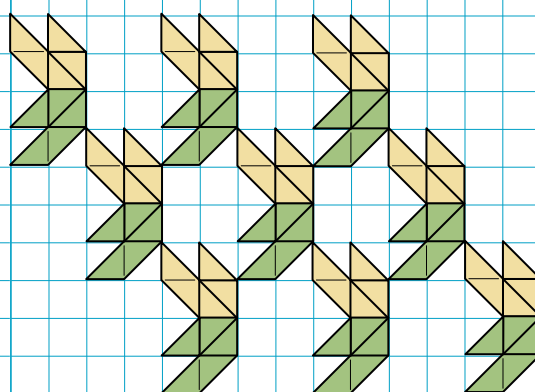
A4-35



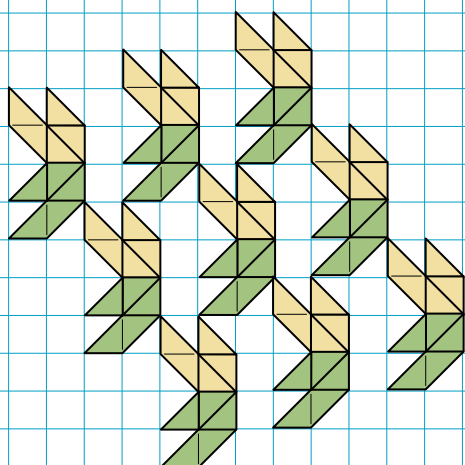
A4-36



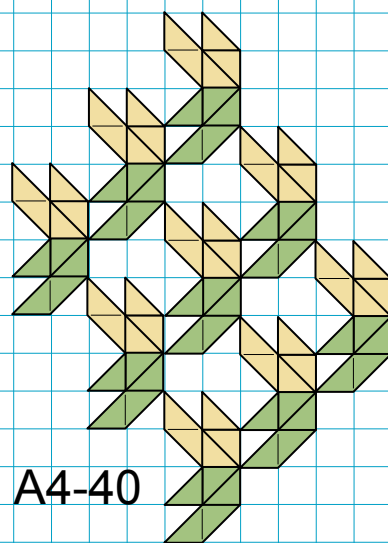
A4-37



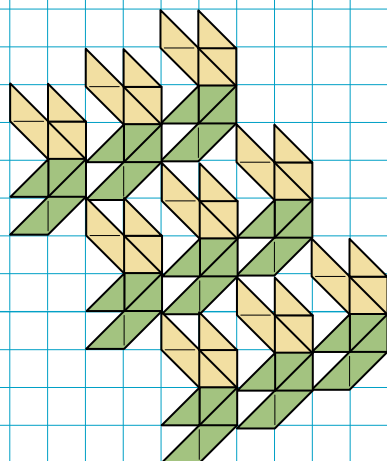
A4-38



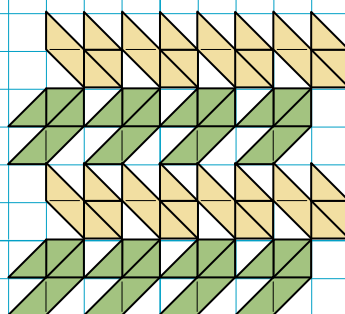
A4-39



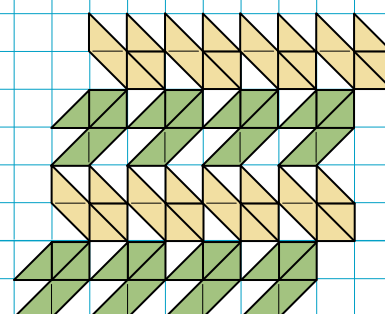
A4-40



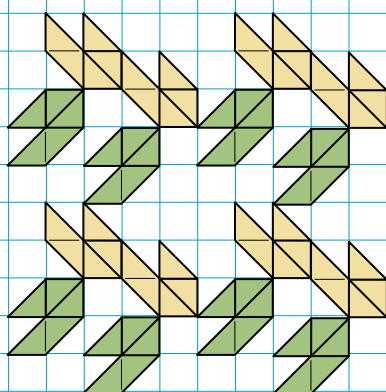
A4-41



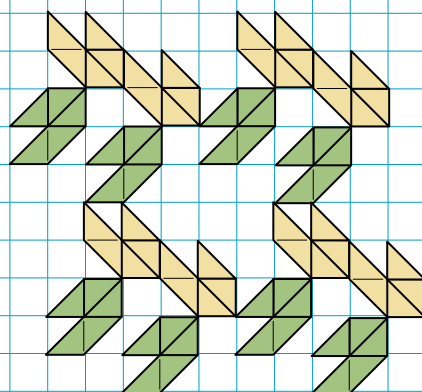
A4-42



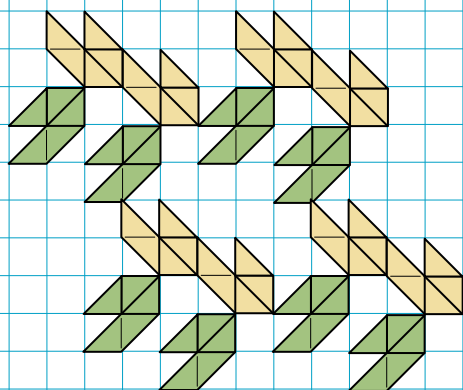
A4-43



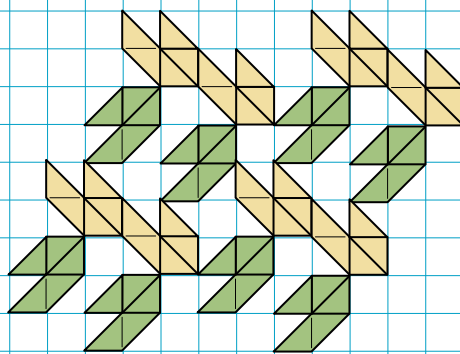
A4-44



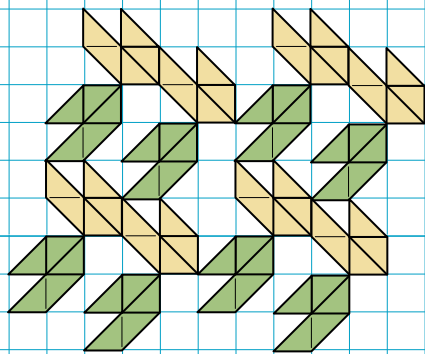
A4-45



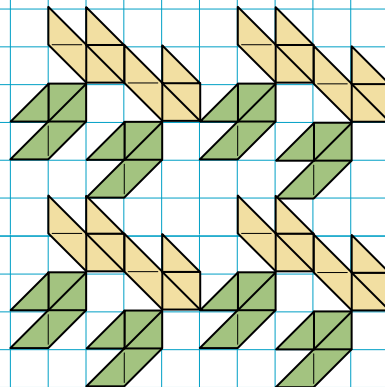
A4-46



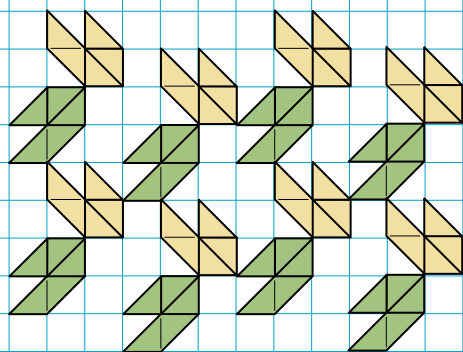
A4-47



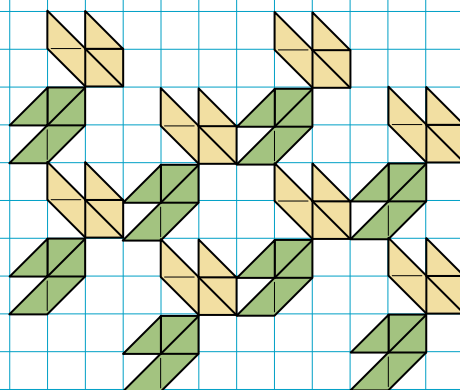
A4-48



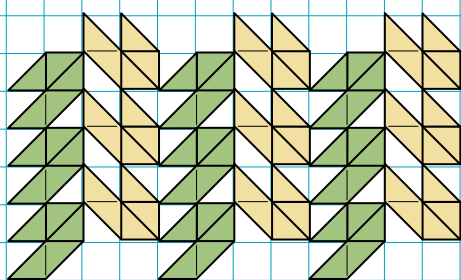
A4-49



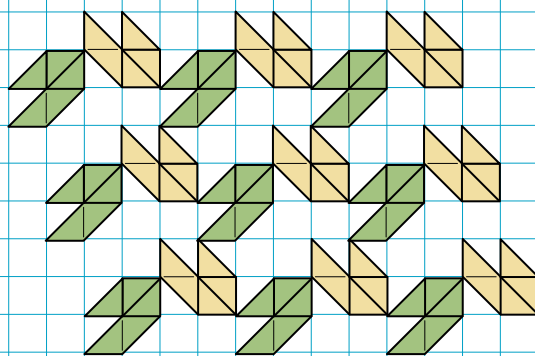
A4-50



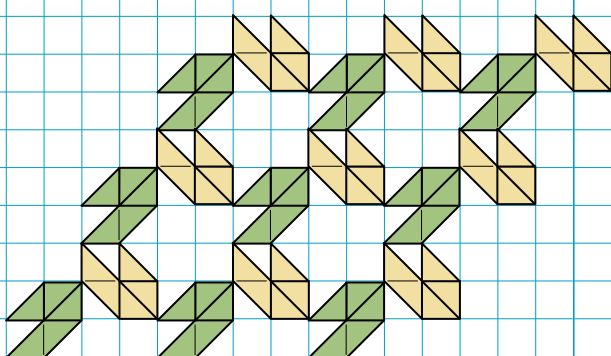
A4-51



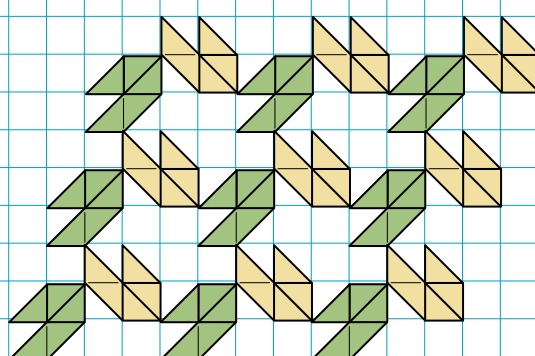
A4-52



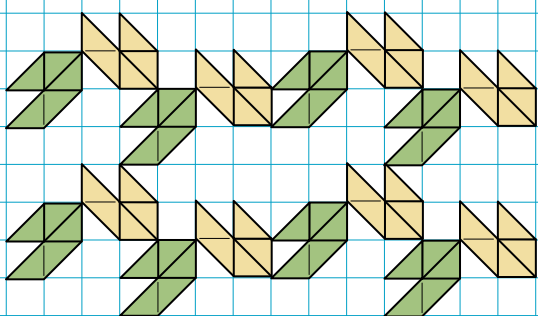
A4-53



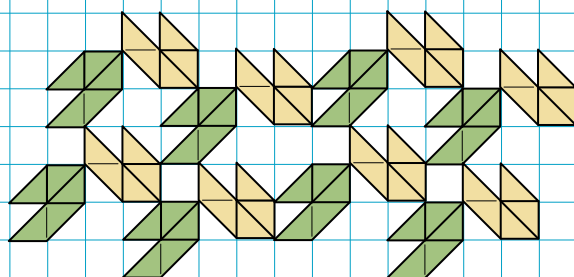
A4-54



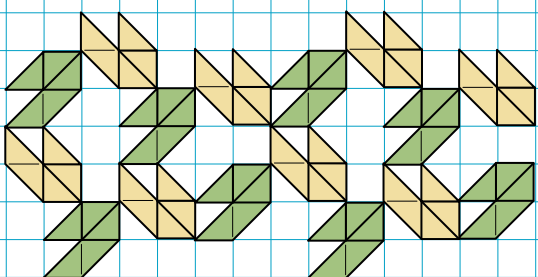
A4-55



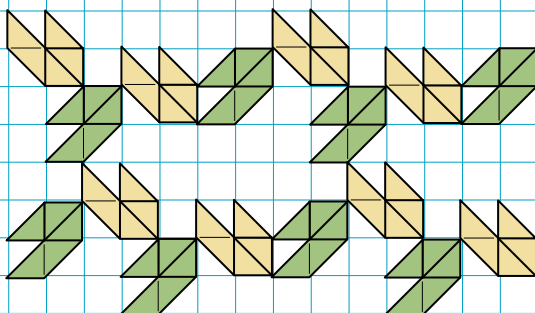
A4-56



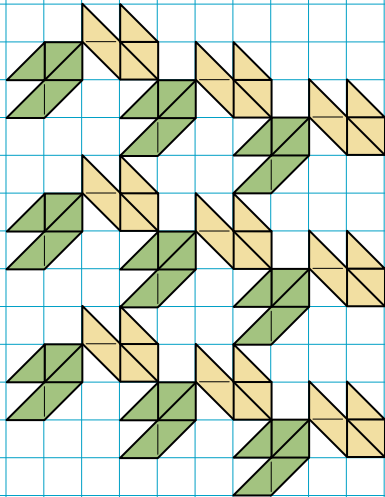
A4-57



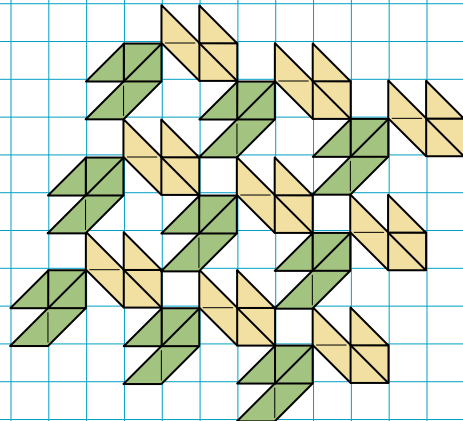
A4-58



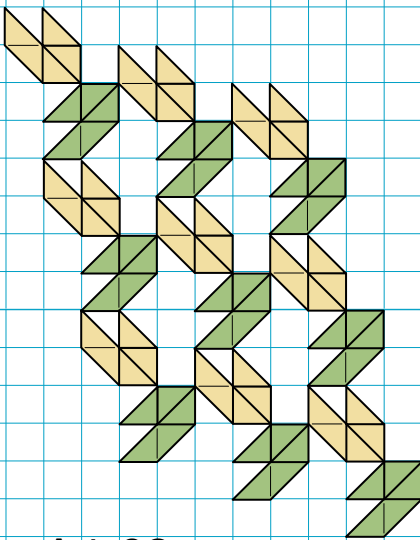
A4-59



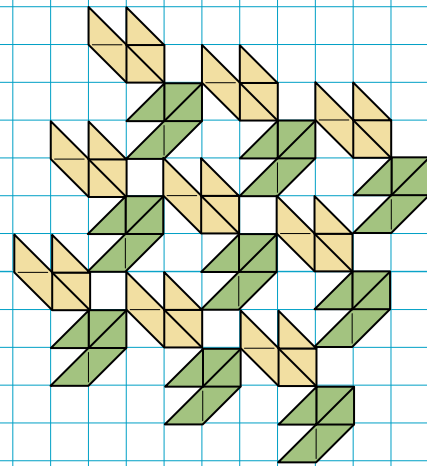
A4-60



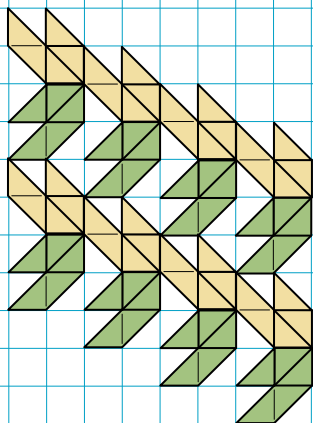
A4-61



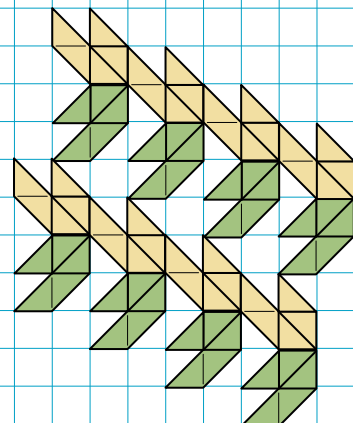
A4-62



A4-63

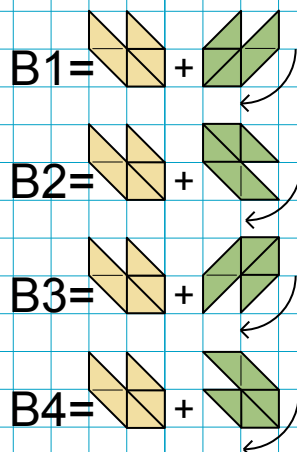


A4-64

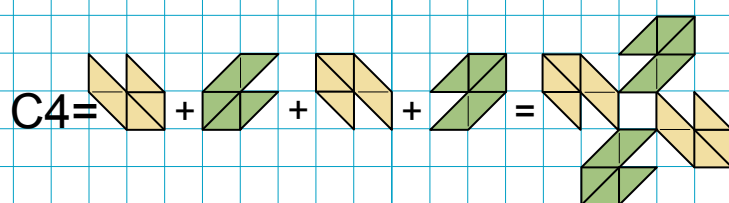
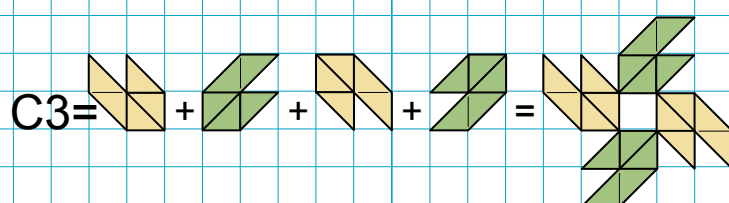
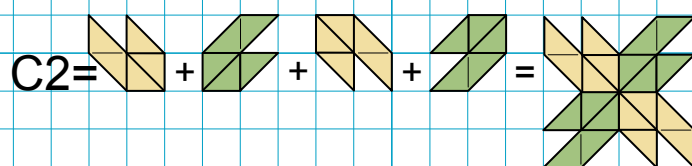
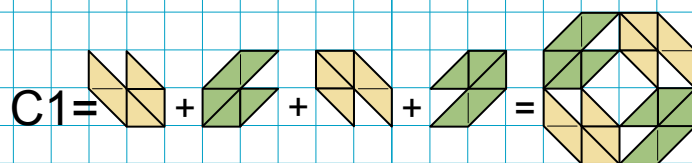


A4-65

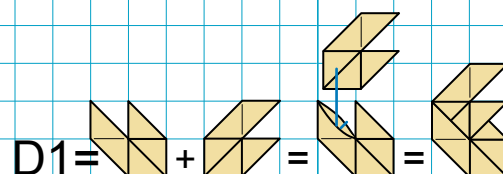
B=MODULO BASE + MODULO BASE INVERSO



C=MODULO COMPOSTO DA 4 MODULI BASE



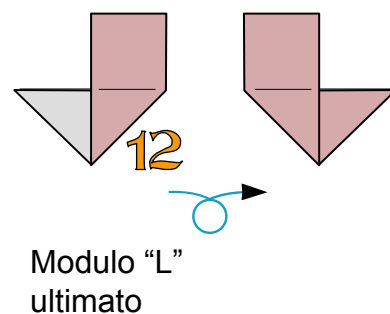
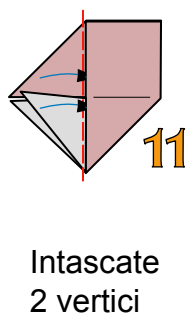
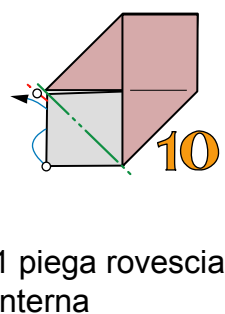
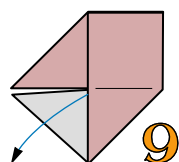
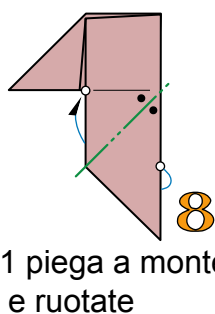
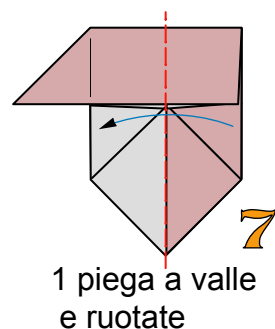
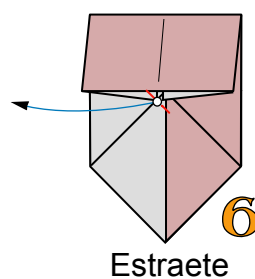
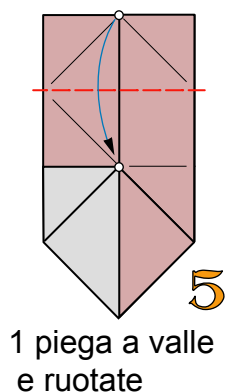
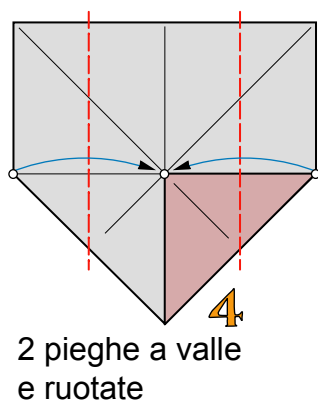
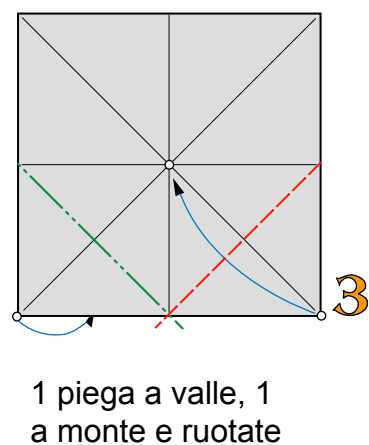
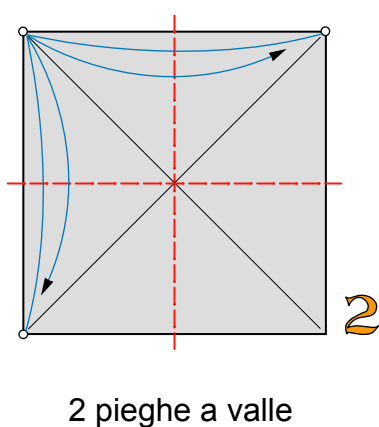
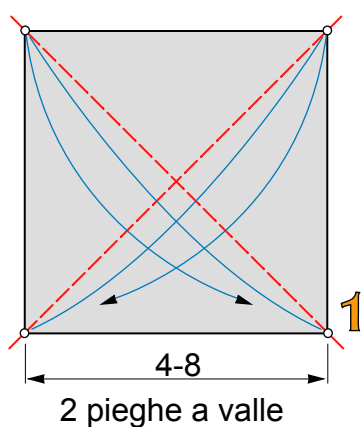
D=2 MODULI BASE COMPENETRATI



MODULO "L"

Per questo modulo ho eseguito aggregazioni di tipo A1, A2, A3, B1, B2, B3, B4, C1, C2, C3, C4, C5, C6, D1, D2, E1, E2, E3: moduli semplici, ruotati, ribaltati, composti e compenetrati.

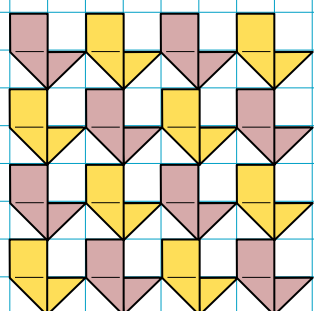
Adoperate fogli quadrati monocolori, di colore differente, di 4-8 cm di lato.



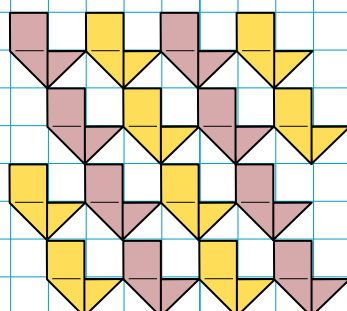
L - COMPOSIZIONI MODULARI

A= 2 MODULI BASE

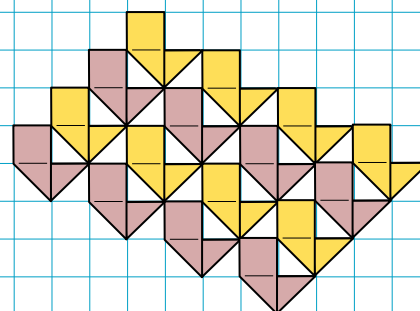
$$A1 = \text{[purple L-shape]} + \text{[yellow L-shape rotated 90°]} \leftarrow$$



A1-1

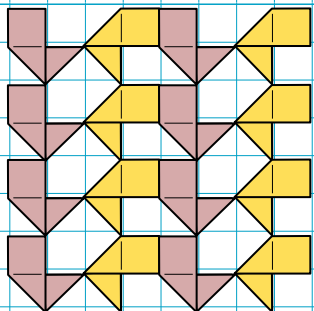


A1-2

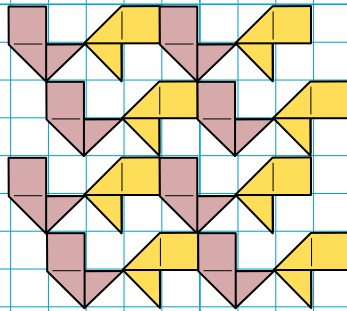


A1-3

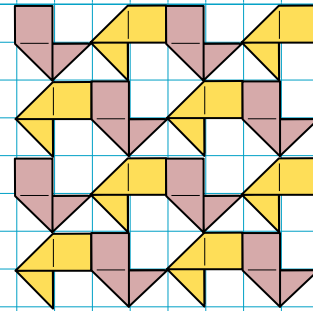
$$A2 = \text{[purple L-shape]} + \text{[yellow L-shape rotated 270°]} \leftarrow$$



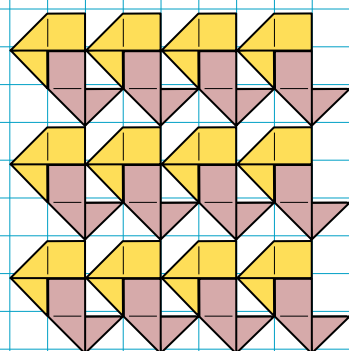
A2-1



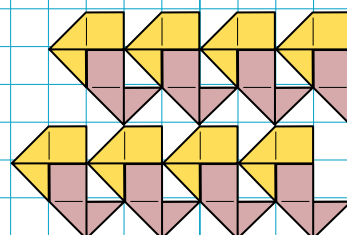
A2-2



A2-3

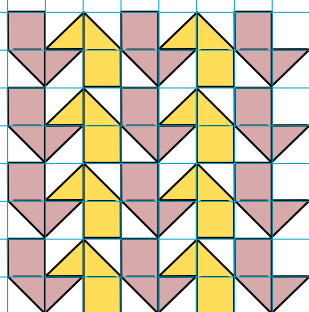


A2-4

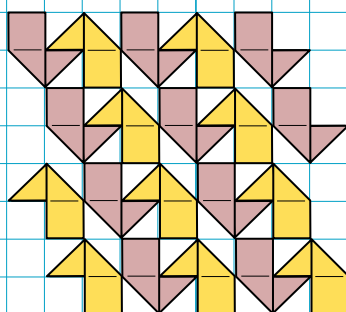


A2-5

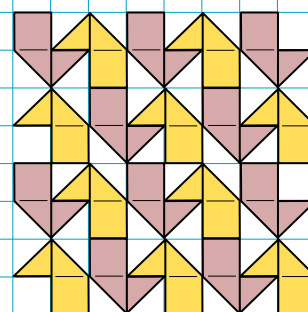
$$A2 = \begin{array}{|c|} \hline \text{purple triangle pointing down} \\ \hline \end{array} + \begin{array}{|c|} \hline \text{yellow triangle pointing left} \\ \hline \end{array}$$



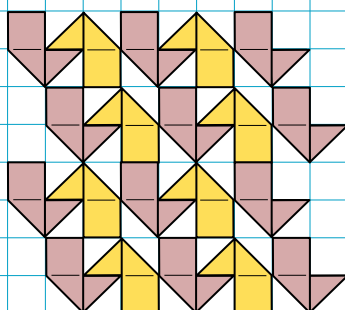
A2-1



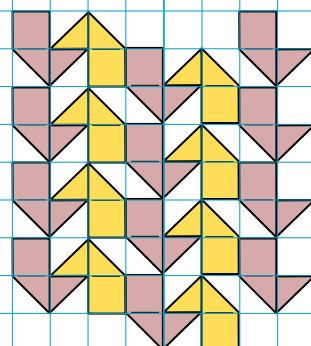
A2-2



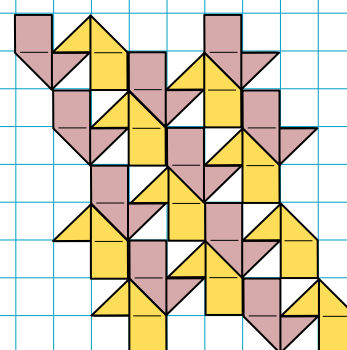
A2-3



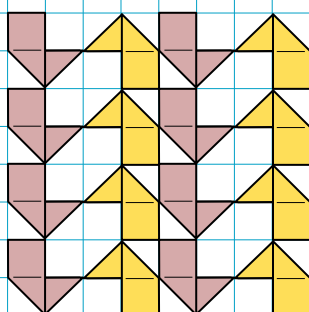
A2-4



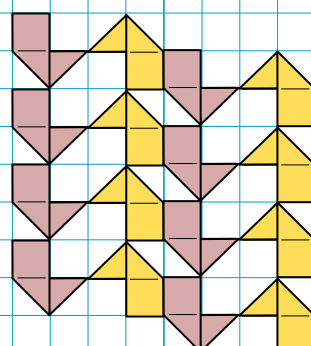
A2-5



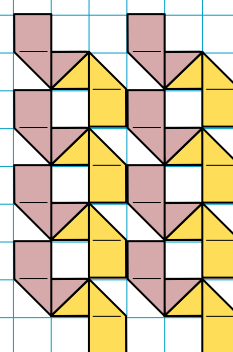
A2-6



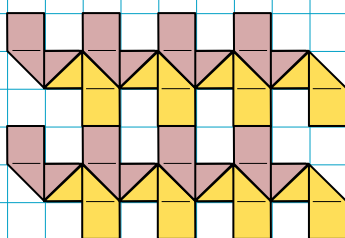
A2-7



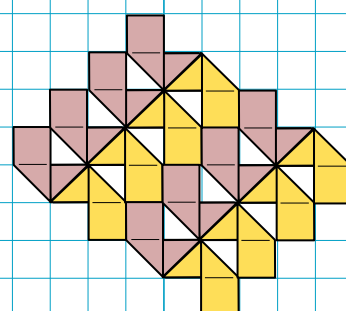
A2-8



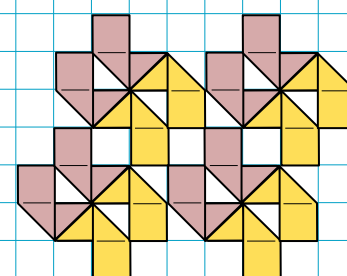
A2-9



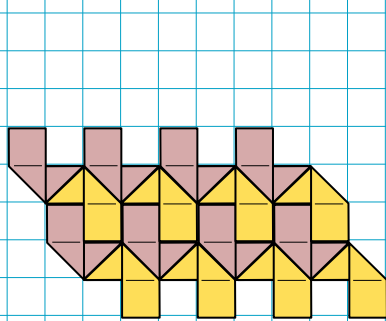
A2-10



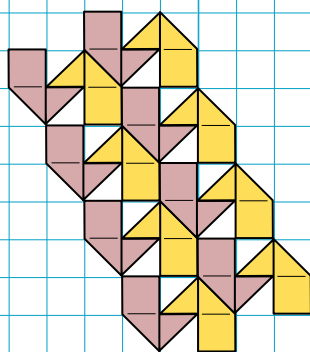
A2-11



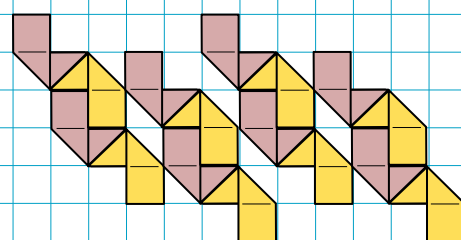
A2-12



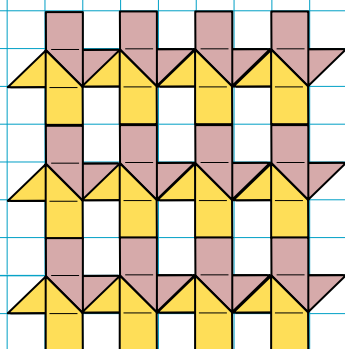
A2-13



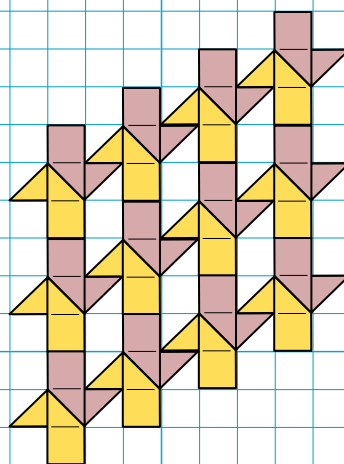
A2-14



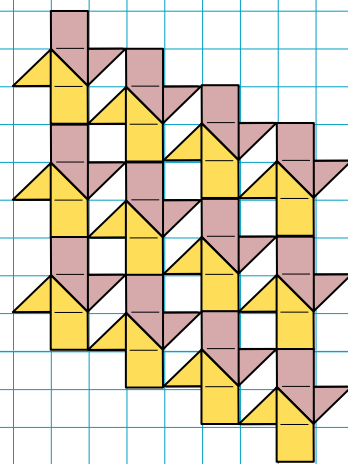
A2-15



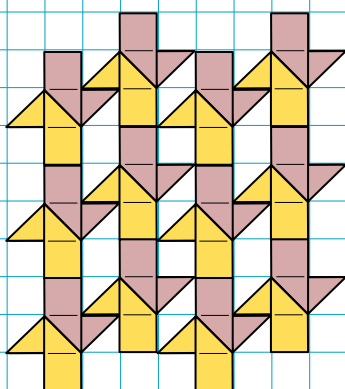
A2-16



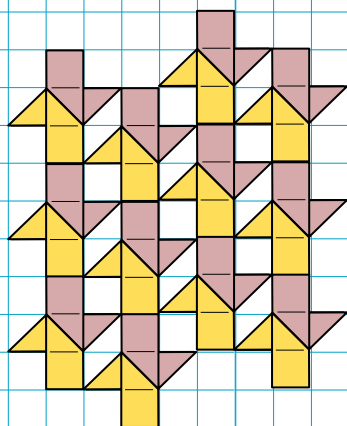
A2-17



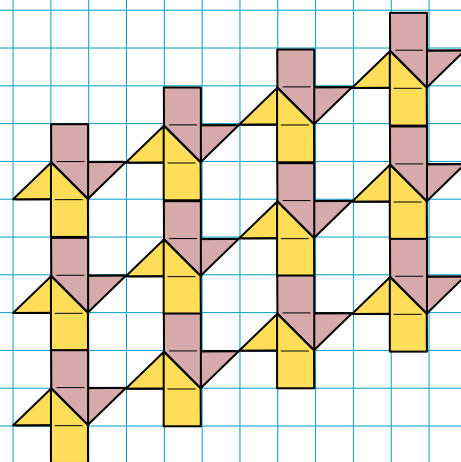
A2-18



A2-19

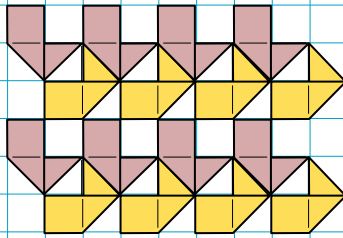


A2-20

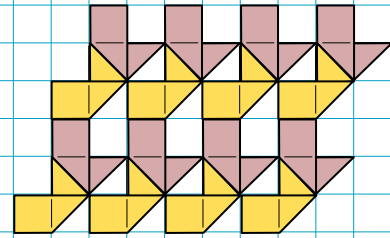


A2-21

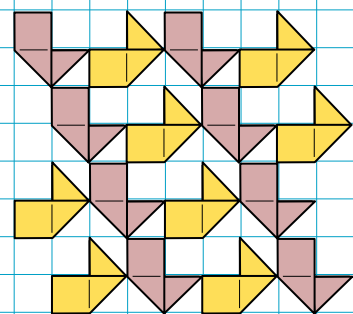
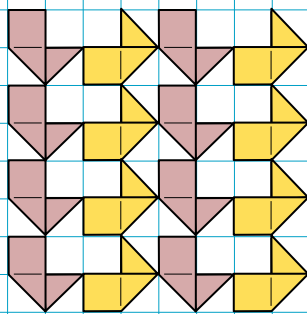
$$A3 = \begin{array}{|c|} \hline \text{purple triangle pointing down} \\ \hline \end{array} + \begin{array}{|c|} \hline \text{yellow triangle pointing right} \\ \hline \end{array}$$



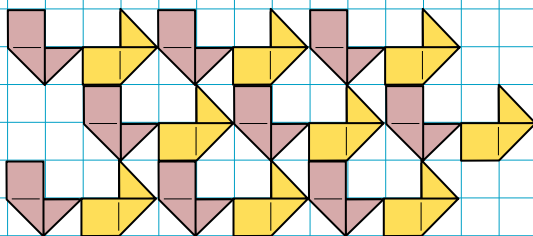
A3-1



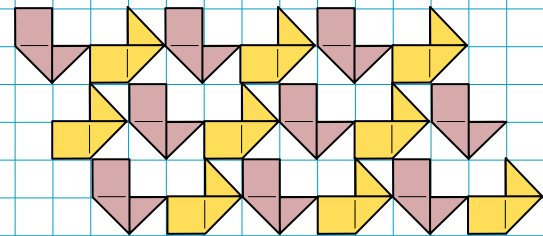
A3-2



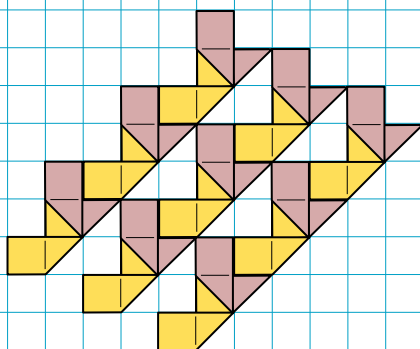
A3-4



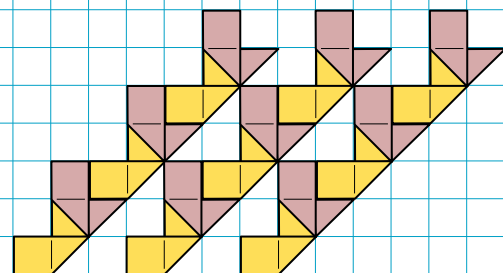
A3-5



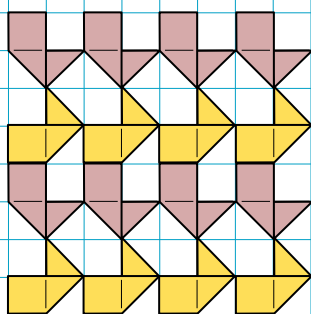
A3-6



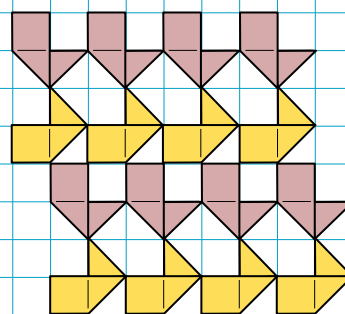
A3-7



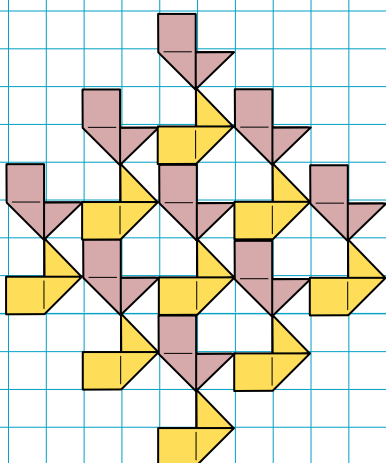
A3-8



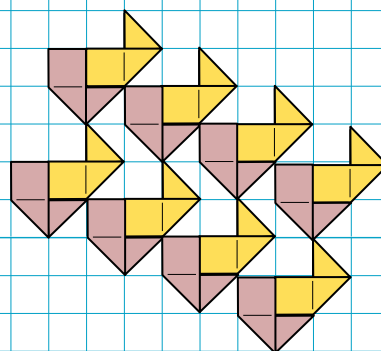
A3-9



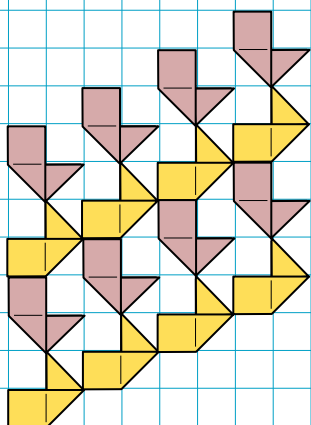
A3-10



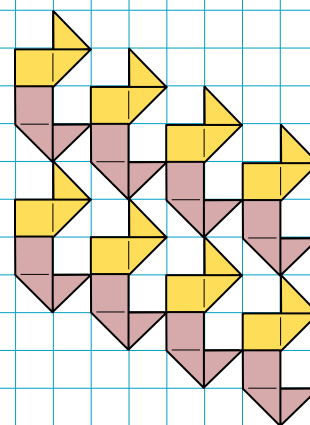
A3-11



A3-12



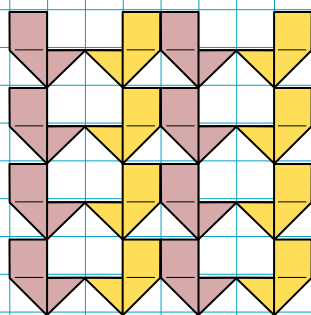
A3-13



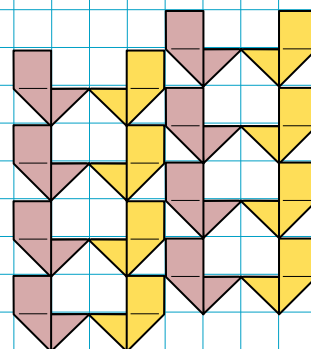
A3-14

B=MODULO BASE + MODULO BASE INVERSO

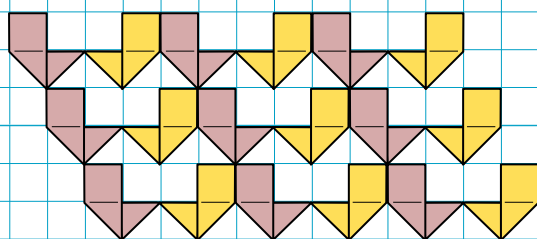
$$B1 = \text{[purple triangle pointing down-left]} + \text{[yellow triangle pointing down-right]}$$



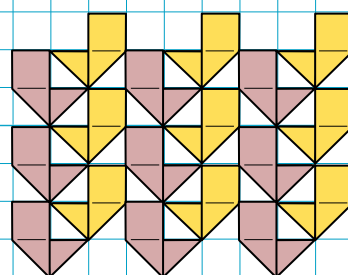
B1-1



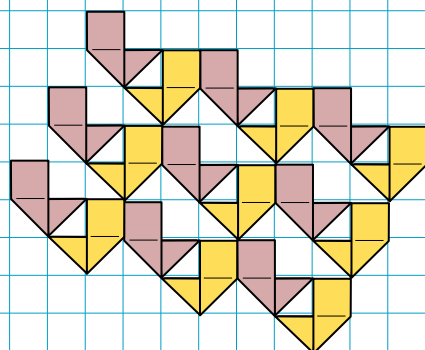
B1-2



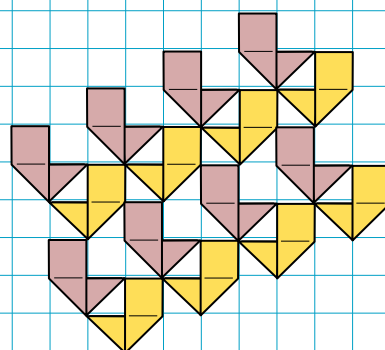
B1-3



B1-4

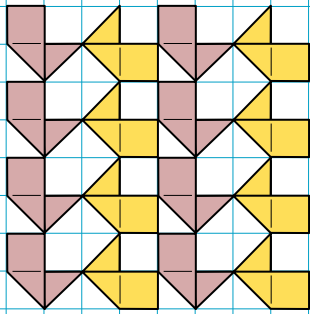


B1-5

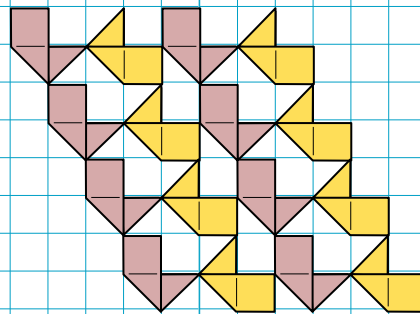


B1-6

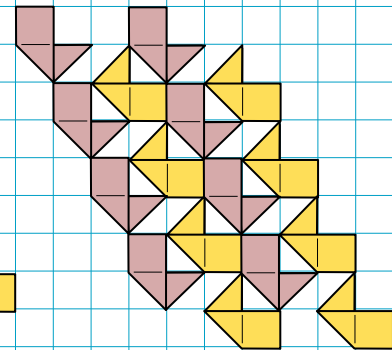
$$B2 = \begin{array}{c} \text{purple triangle pointing down} \\ + \\ \text{yellow triangle pointing left} \end{array}$$



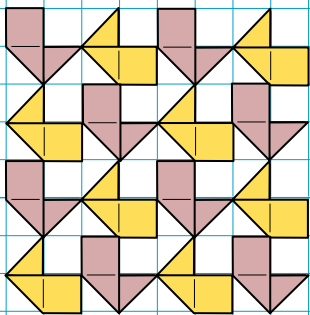
B2-1



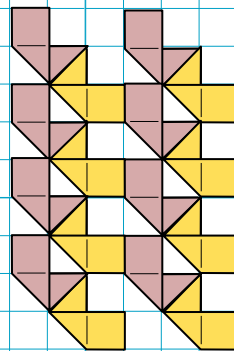
B2-2



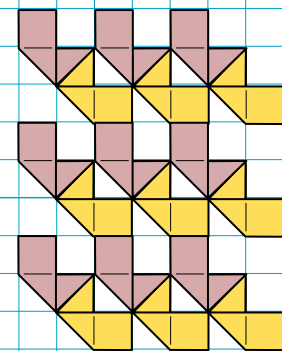
B2-3



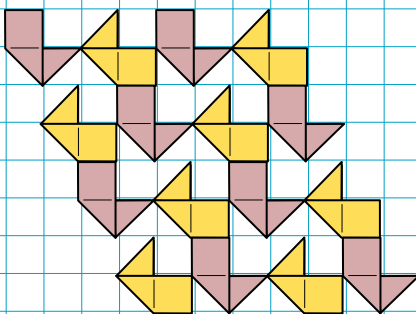
B2-4



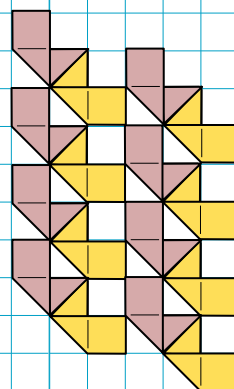
B2-5



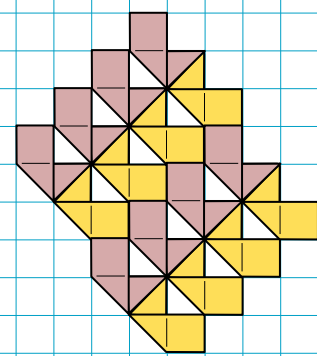
B2-6



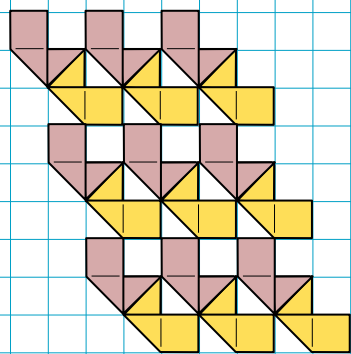
B2-7



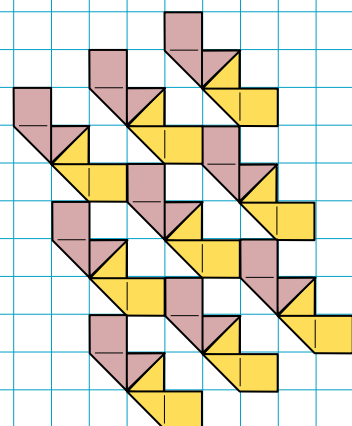
B2-8



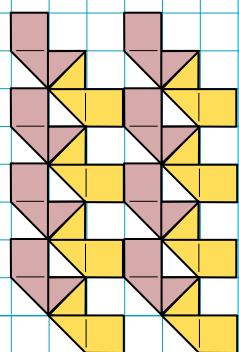
B2-9



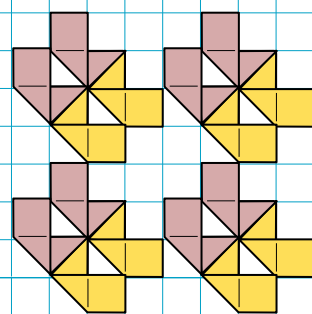
B2-10



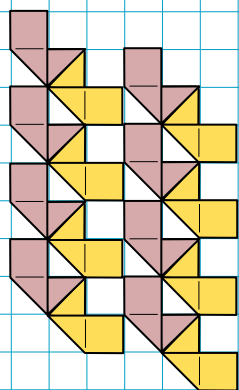
B2-11



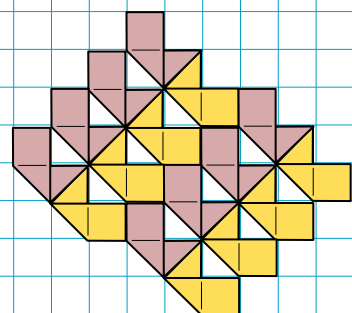
B2-12



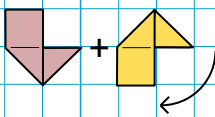
B2-13

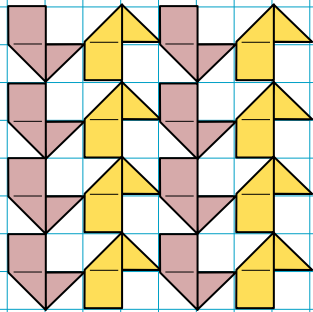


B2-14

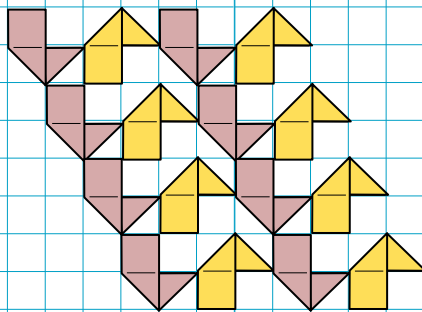


B2-15

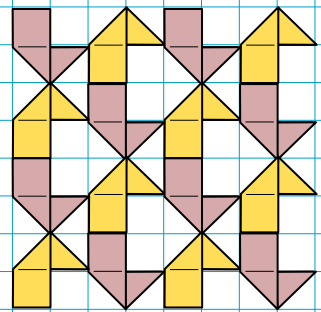
B3= 



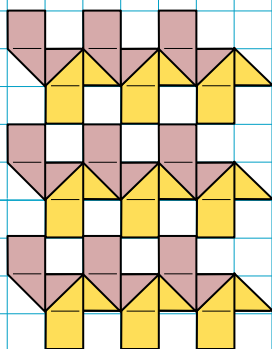
B3-1



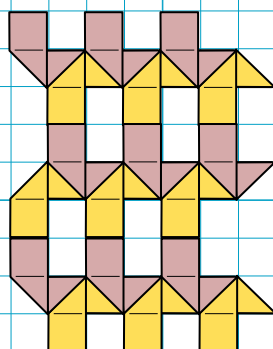
B3-2



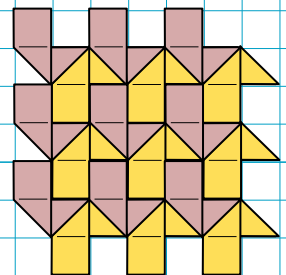
B3-3



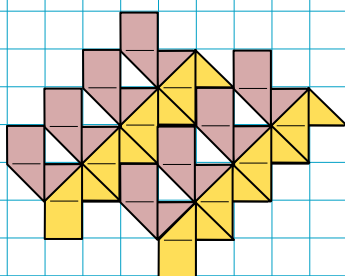
B3-4



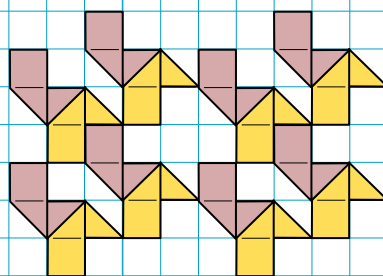
B3-5



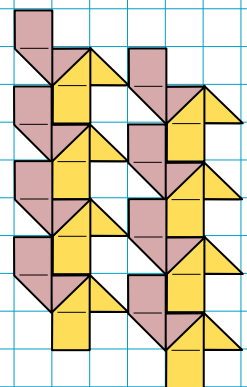
B3-6

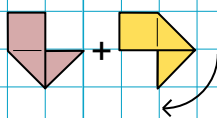


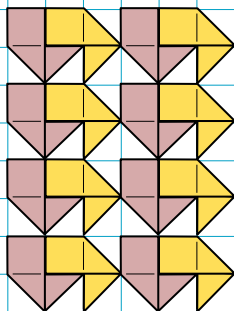
B3-7



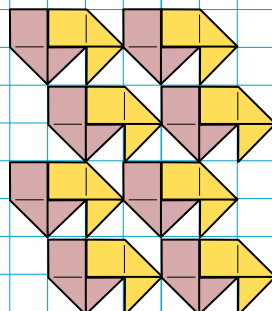
B3-8



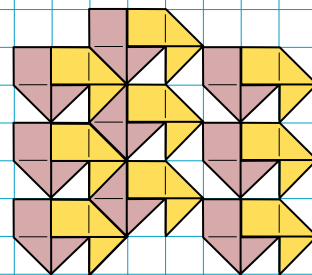
B4= 



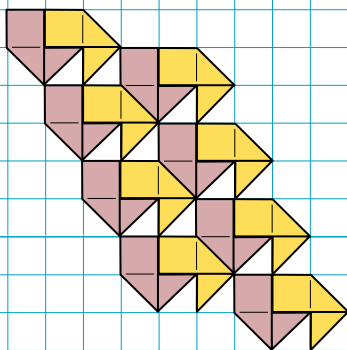
B4-1



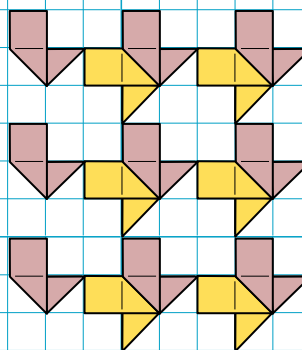
B4-2



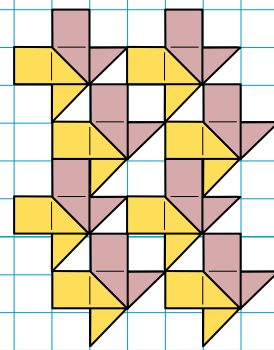
B4-3



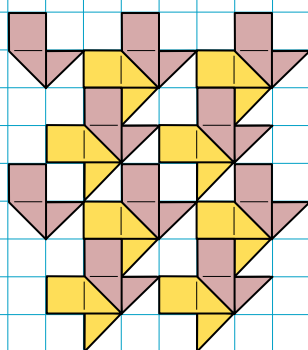
B4-4



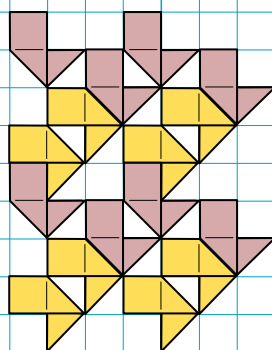
B4-5



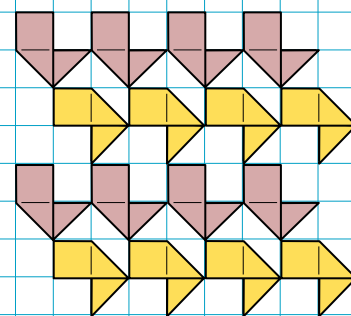
B4-6



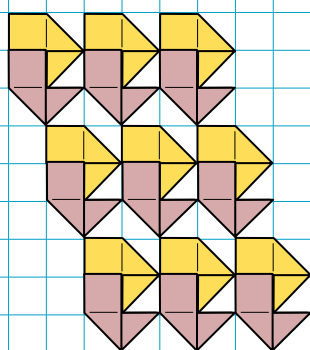
B4-7



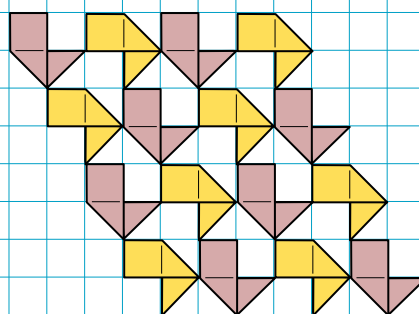
B4-8



B4-9



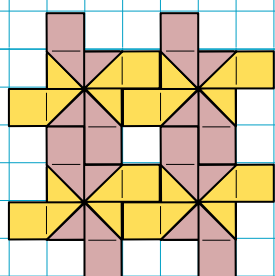
B4-10



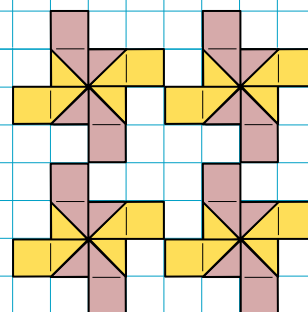
B4-11

C=MODULO COMPOSTO DA 4 MODULI BASE

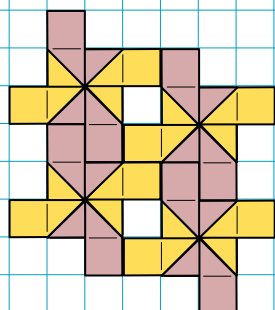
$$C1 = \begin{array}{c} \text{purple triangle pointing left} \\ \text{yellow triangle pointing right} \\ \text{purple triangle pointing left} \\ \text{yellow triangle pointing right} \end{array} = \begin{array}{c} \text{purple triangle pointing left} \\ \text{yellow triangle pointing right} \\ \text{purple triangle pointing left} \\ \text{yellow triangle pointing right} \end{array}$$



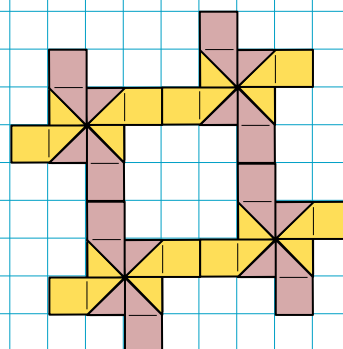
C1-1



C1-2

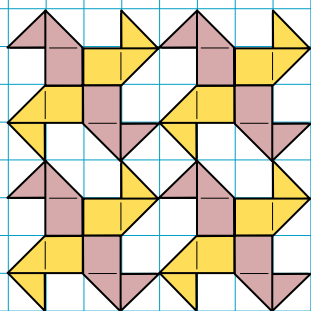


C1-3

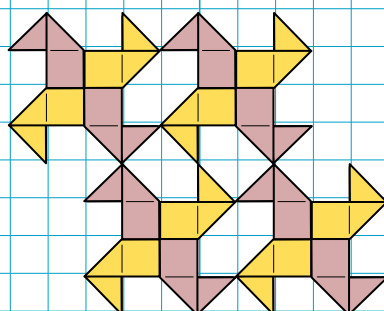


C1-4

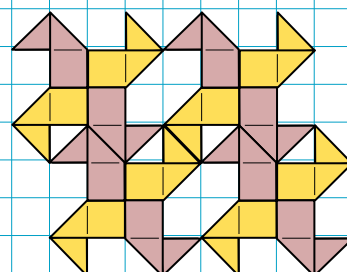
$$C2 = \begin{array}{c} \text{purple} \\ \text{yellow} \end{array} + \begin{array}{c} \text{yellow} \\ \text{purple} \end{array} + \begin{array}{c} \text{purple} \\ \text{yellow} \end{array} + \begin{array}{c} \text{yellow} \\ \text{purple} \end{array} = \begin{array}{c} \text{purple} \\ \text{yellow} \end{array}$$



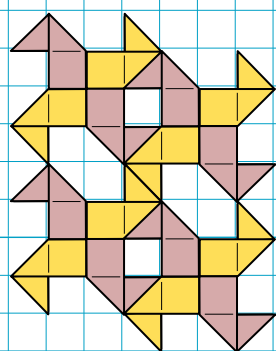
C2-1



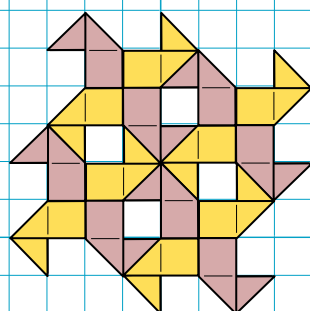
C2-2



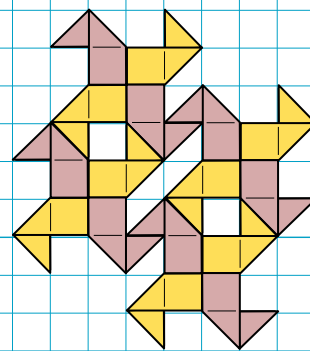
C2-3



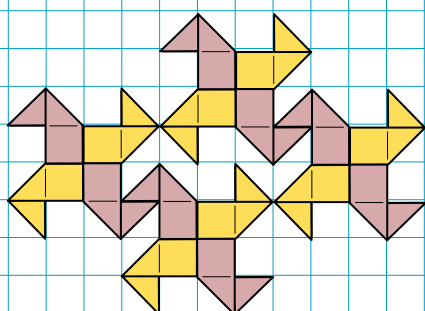
C2-4



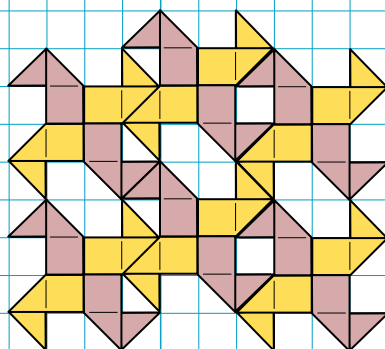
C2-5



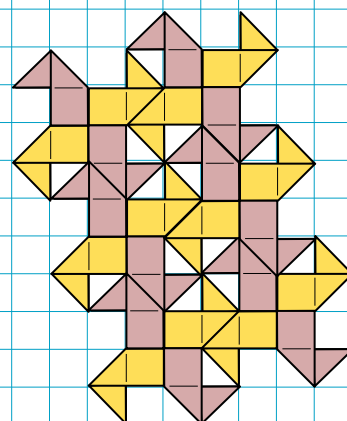
C2-6



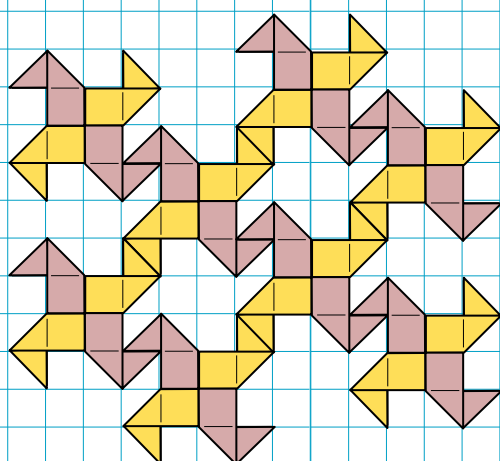
C2-7



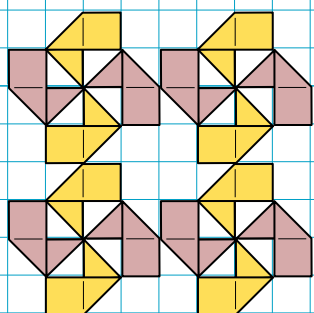
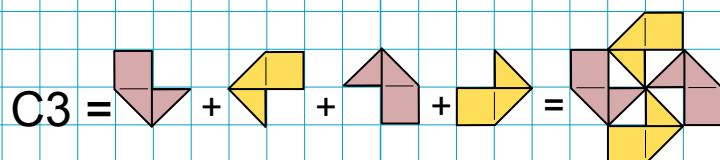
C2-8



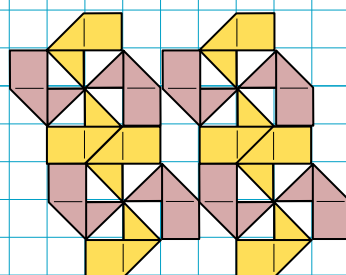
C2-9



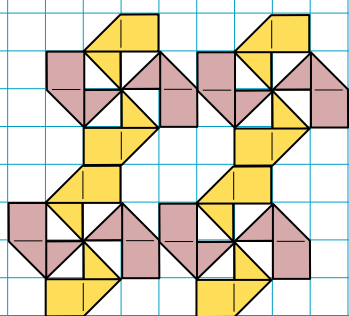
C2-10



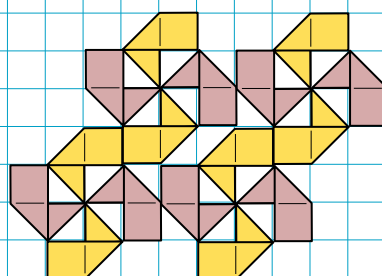
C3-1



C3-2

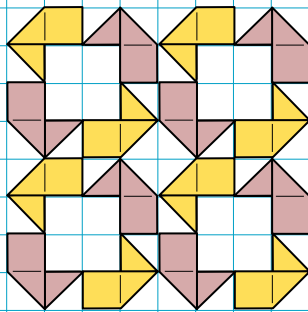


C3-3

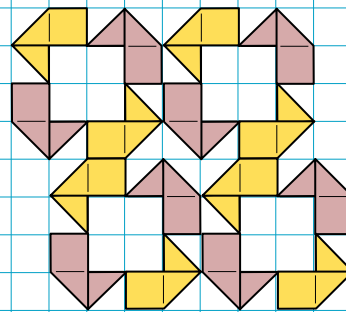


C3-4

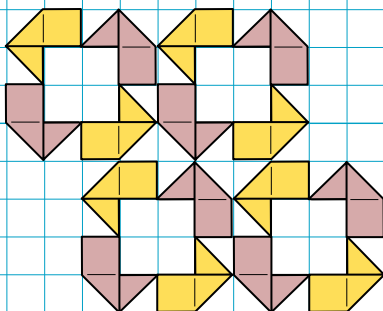
$$C4 = \begin{array}{c} \text{purple} \\ \diagup \quad \diagdown \\ \text{yellow} \end{array} + \begin{array}{c} \text{yellow} \\ \diagdown \quad \diagup \\ \text{purple} \end{array} + \begin{array}{c} \text{purple} \\ \diagdown \quad \diagup \\ \text{yellow} \end{array} + \begin{array}{c} \text{yellow} \\ \diagup \quad \diagdown \\ \text{purple} \end{array} = \begin{array}{c} \text{yellow} \quad \text{purple} \\ \diagdown \quad \diagup \\ \text{purple} \quad \text{yellow} \end{array}$$



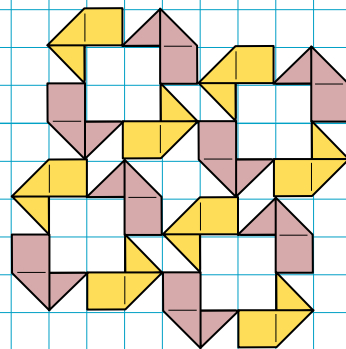
C4-1



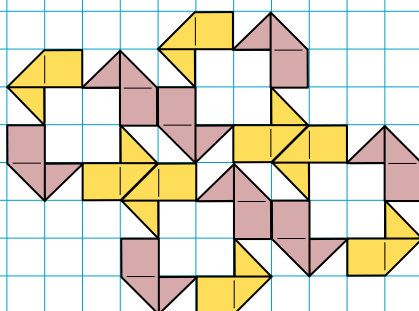
C4-2



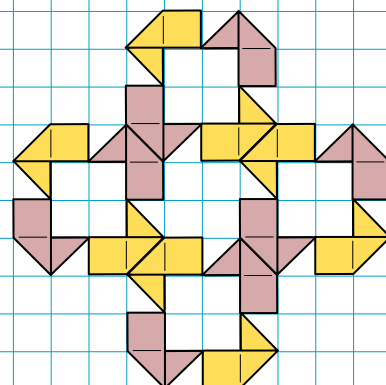
C4-3



C4-4

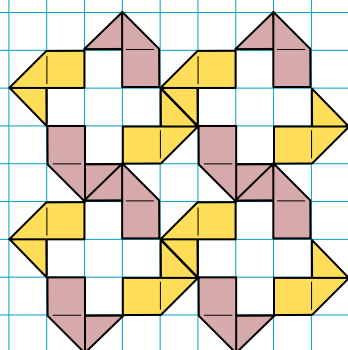


C4-5

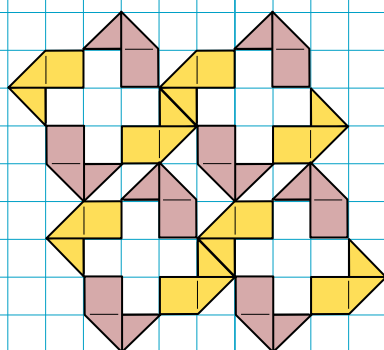


C4-6

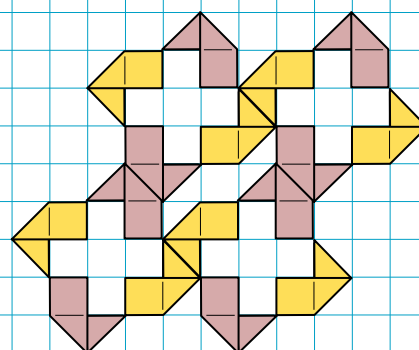
$$C5 = \begin{array}{c} \text{purple} \\ \text{yellow} \end{array} + \begin{array}{c} \text{yellow} \\ \text{purple} \end{array} + \begin{array}{c} \text{purple} \\ \text{yellow} \end{array} + \begin{array}{c} \text{yellow} \\ \text{purple} \end{array} = \begin{array}{c} \text{purple} \\ \text{yellow} \end{array}$$



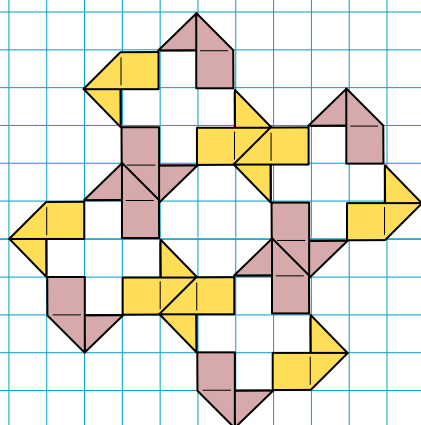
C5-1



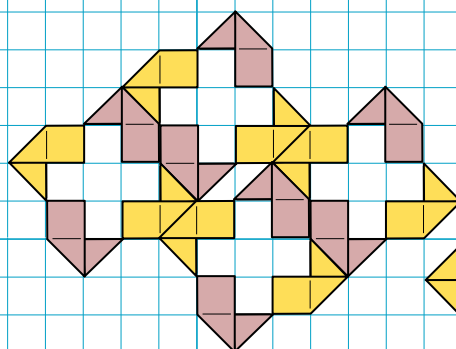
C5-2



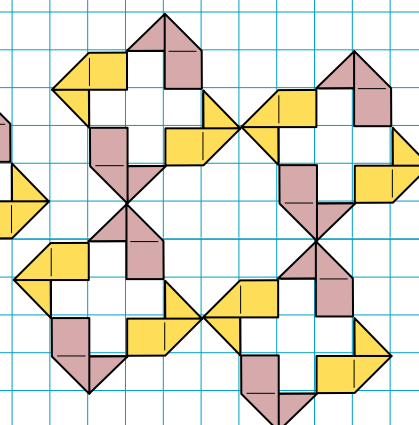
C5-3



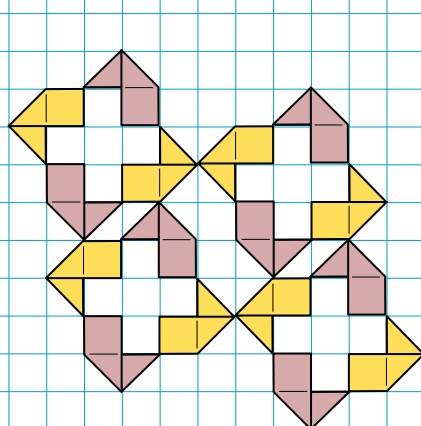
C5-4



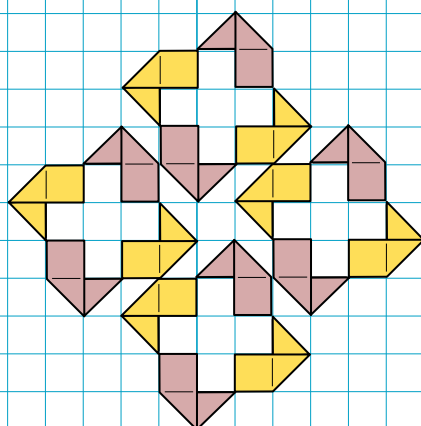
C5-5



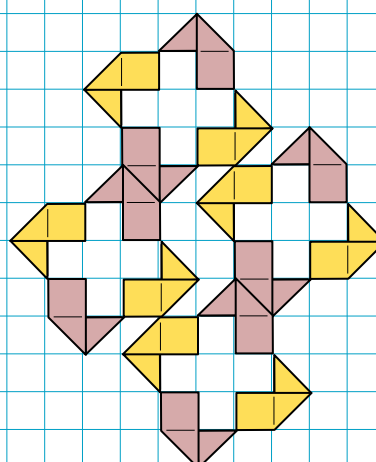
C5-6



C5-7

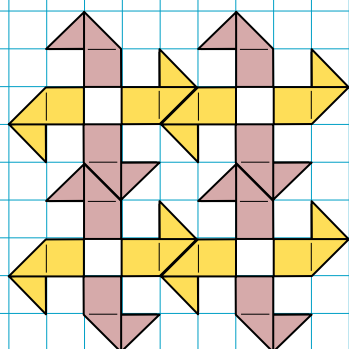


C5-8

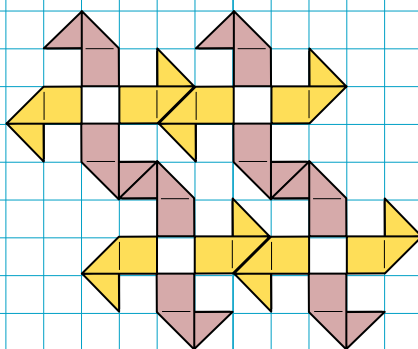


C5-9

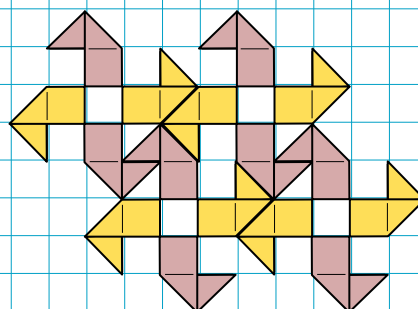
$$C6 = \begin{array}{c} \text{purple L-shape} \\ \text{yellow L-shape} \\ \text{purple L-shape} \\ \text{yellow L-shape} \end{array} + = \begin{array}{c} \text{purple L-shape} \\ \text{yellow L-shape} \\ \text{purple L-shape} \\ \text{yellow L-shape} \end{array}$$



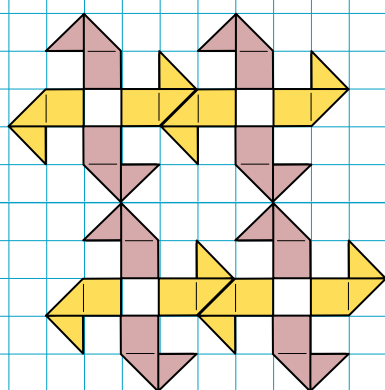
C6-1



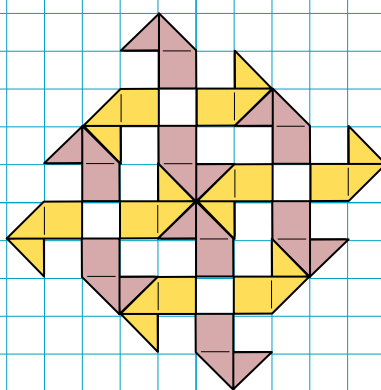
C6-2



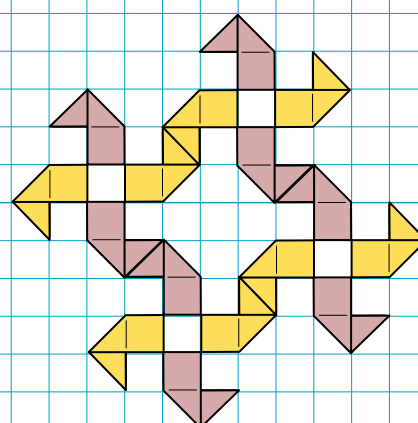
C6-3



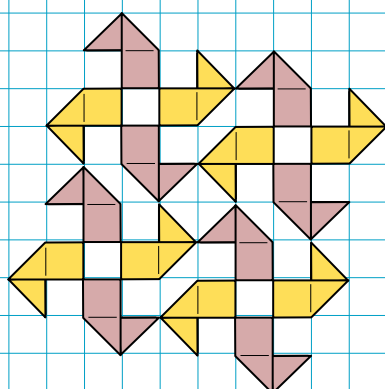
C6-4



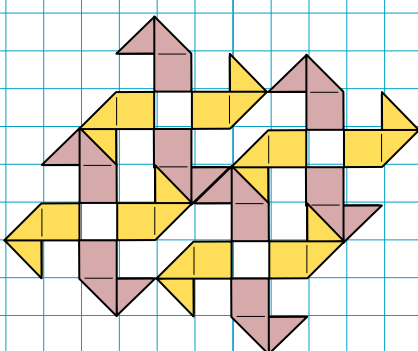
C6-5



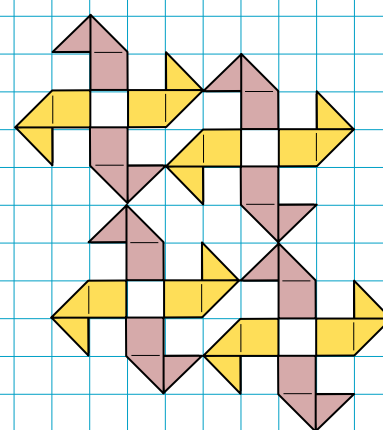
C6-6



C6-7

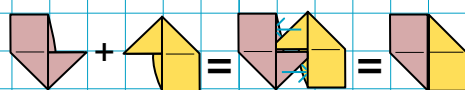


C6-8

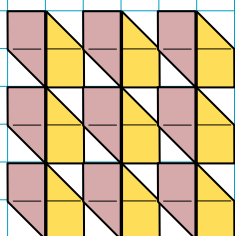


C6-9

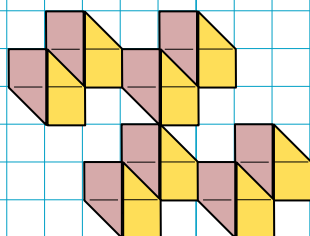
D=2 MODULI BASE COMPENETRATI



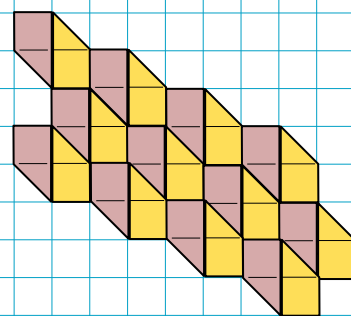
$$D1 = \text{purple module} + \text{yellow module}$$



D1-1

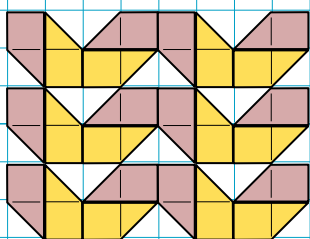


D1-2

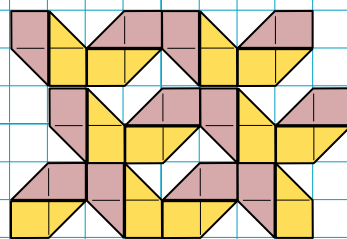


D1-3

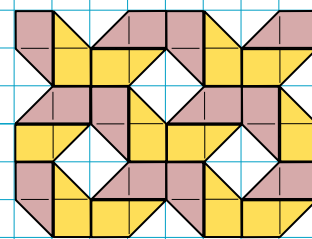
$$D2 = \text{purple module} + \text{yellow module}$$



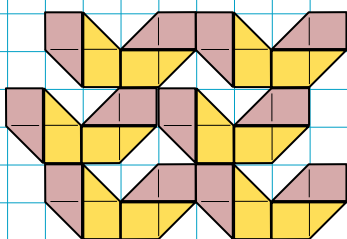
D2-1



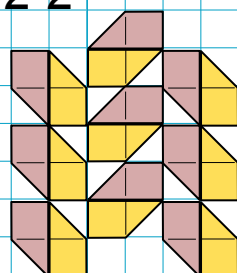
D2-2



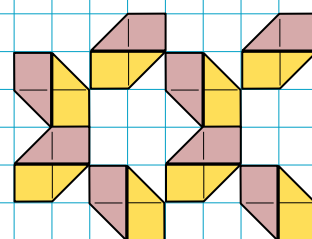
D2-3



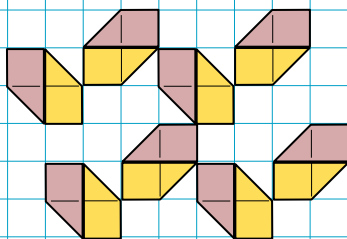
D2-4



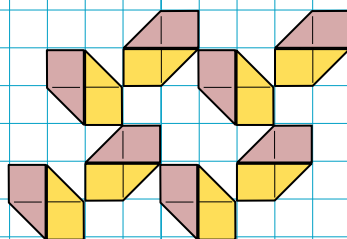
D2-5



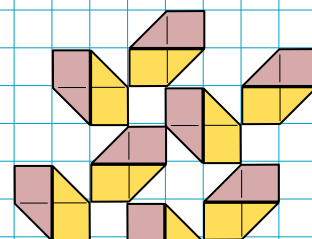
D2-6



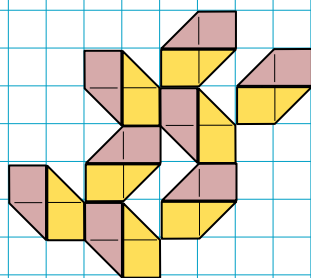
D2-7



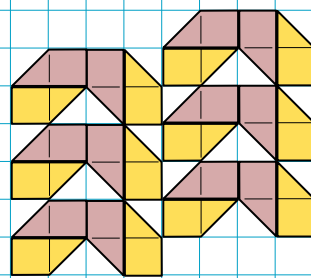
D2-8



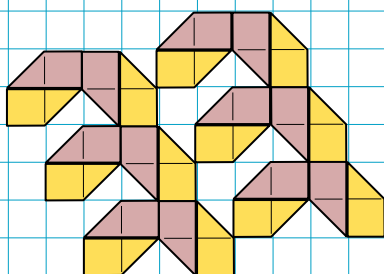
D2-9



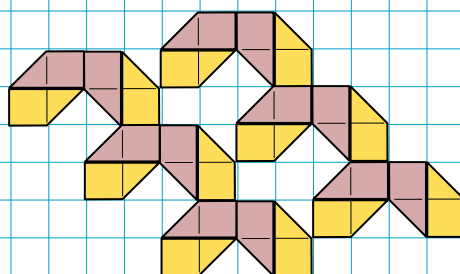
D2-10



D2-11



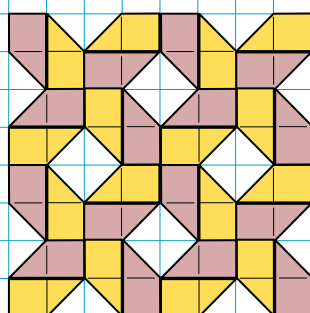
D2-12



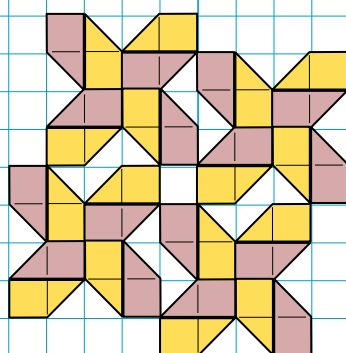
D2-13

E= MODULO COMPOSTO DA 4 MODULI COMPENETRATI

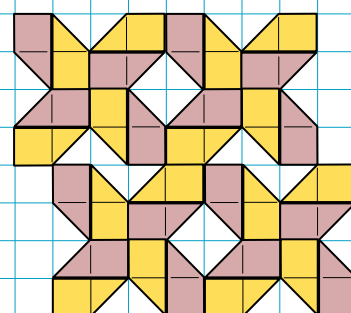
$$E1 = \text{triangle} + \text{triangle} + \text{triangle} + \text{triangle} = \text{star shape}$$



E1-1

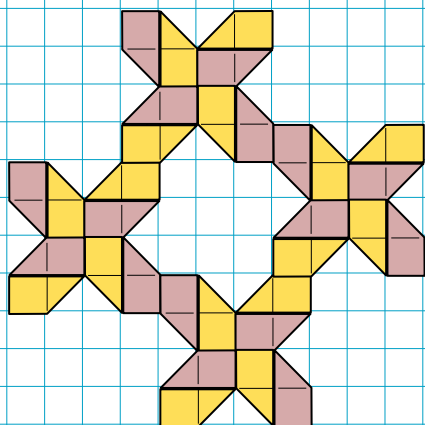


E1-2

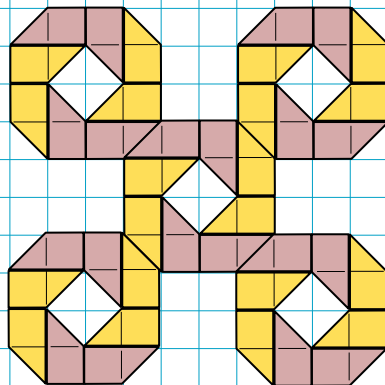


E1-3

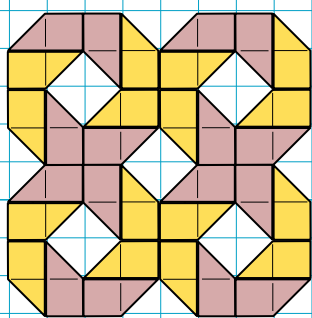
$$E2 = \begin{array}{c} \text{yellow triangle} \\ \text{purple triangle} \end{array} + \begin{array}{c} \text{yellow triangle} \\ \text{purple triangle} \end{array} + \begin{array}{c} \text{yellow triangle} \\ \text{purple triangle} \end{array} + \begin{array}{c} \text{yellow triangle} \\ \text{purple triangle} \end{array} = \begin{array}{c} \text{yellow triangle} \\ \text{purple triangle} \end{array}$$



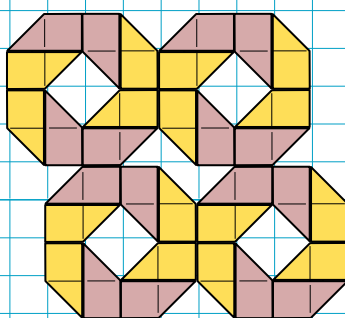
E2-1



E2-2

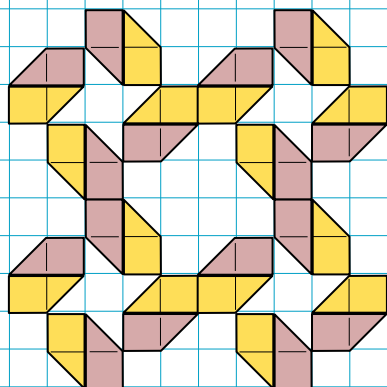


E2-3

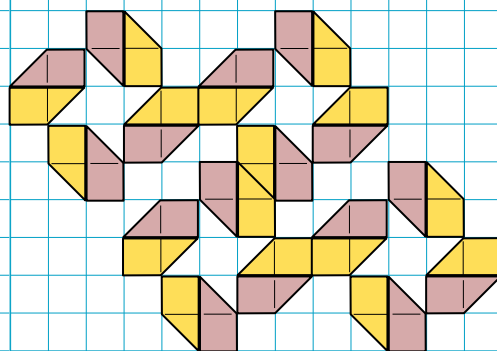


E2-4

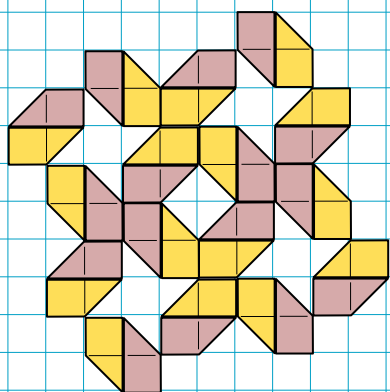
$$E3 = \begin{array}{c} \text{yellow triangle} \\ \text{purple triangle} \end{array} + \begin{array}{c} \text{yellow triangle} \\ \text{purple triangle} \end{array} + \begin{array}{c} \text{yellow triangle} \\ \text{purple triangle} \end{array} + \begin{array}{c} \text{yellow triangle} \\ \text{purple triangle} \end{array} = \begin{array}{c} \text{yellow triangle} \\ \text{purple triangle} \end{array}$$



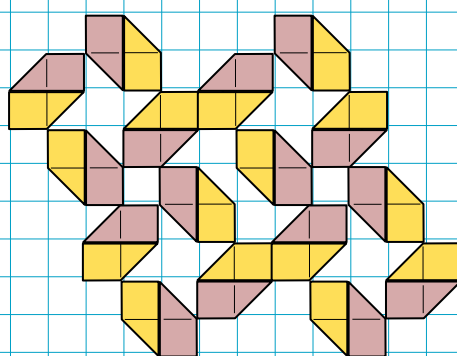
E3-1



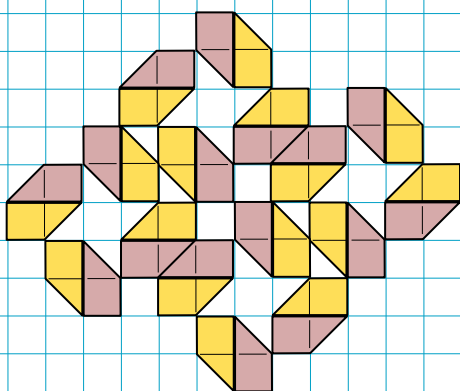
E3-2



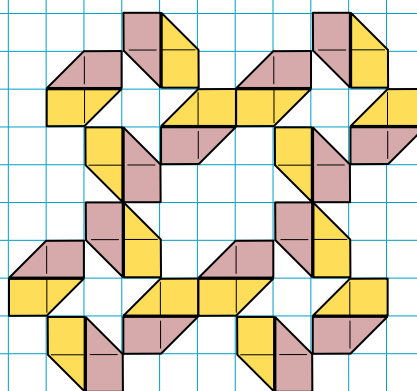
E3-3



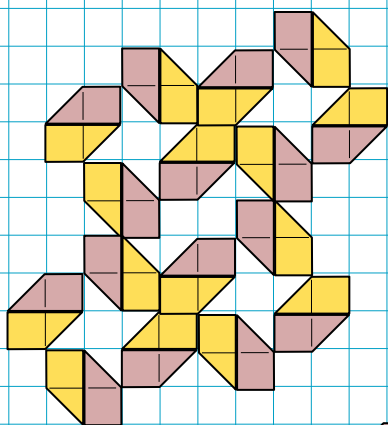
E3-4



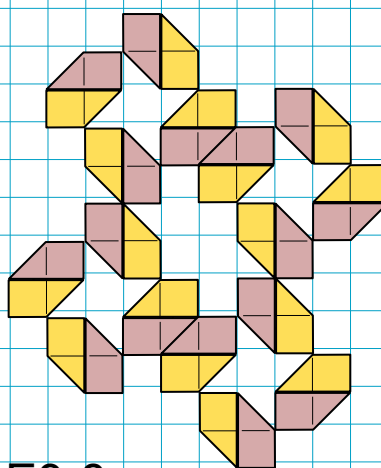
E3-5



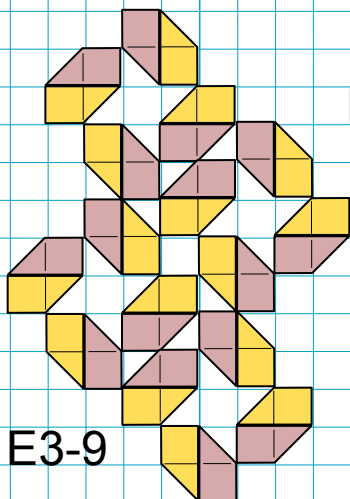
E3-6



E3-7



E3-8



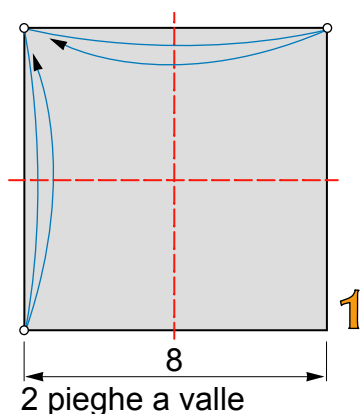
E3-9

MODULO "S"

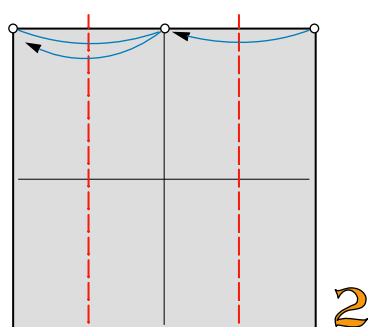
Per questo modulo ho eseguito aggregazioni di tipo A1, A2.

Per chi ne avesse voglia, è possibile proseguire con tutte le altre tipologie d'intervento.

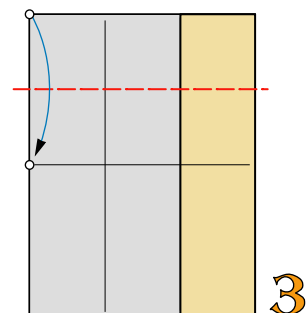
Adoperate fogli quadrati monocolori, di colore differente, di 4-8 cm di lato.



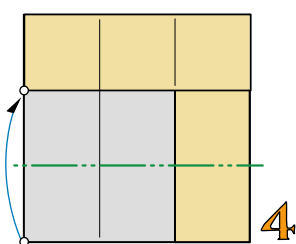
2 pieghe a valle



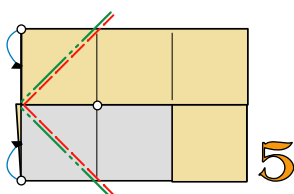
2 pieghe a valle e ruotate il bordo destro



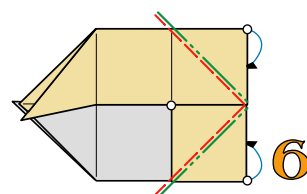
1 piega a valle e ruotate



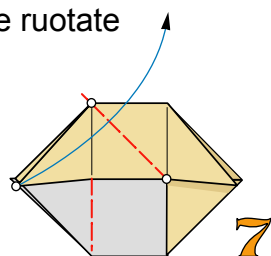
1 piega a monte e ruotate



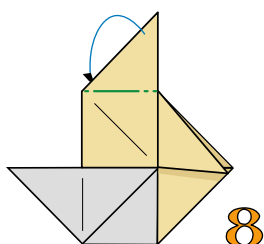
2 pieghe rovesce interne



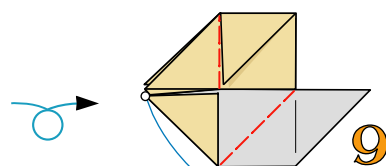
2 pieghe rovesce interne



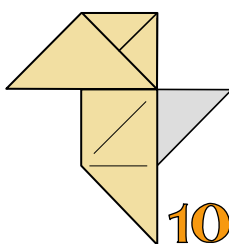
1 piega a valle e ruotate ripiegando



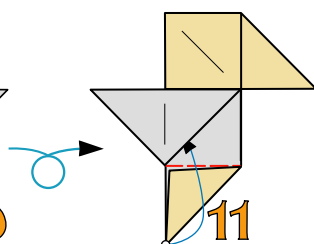
1 piega a monte, ruotate e ribaltate



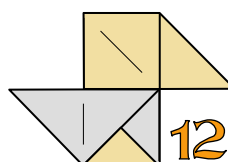
1 piega a valle e ruotate ripiegando



Ribaltate



1 piega a valle ed intascate

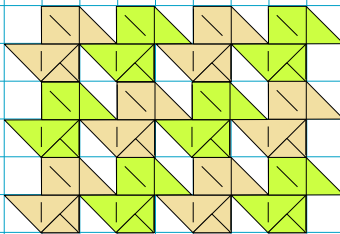


Modulo "S" ultimato

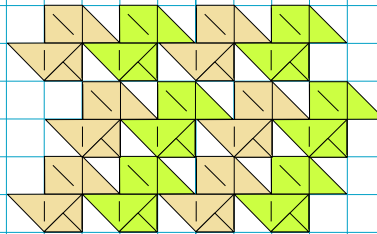
S - COMPOSIZIONI MODULARI

A= 2 MODULI BASE

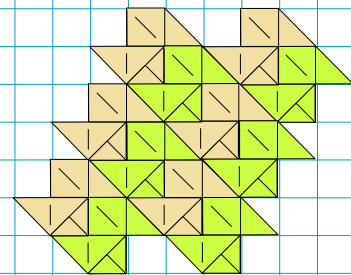
$$A1 = \begin{array}{c} \triangle \\ \triangle \end{array} + \begin{array}{c} \triangle \\ \triangle \end{array} \curvearrowright$$



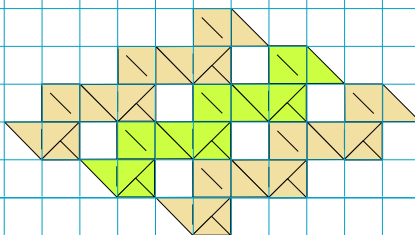
A1-1



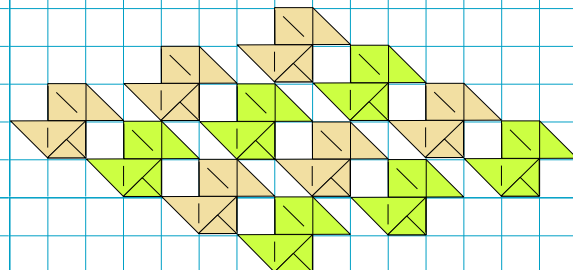
A1-2



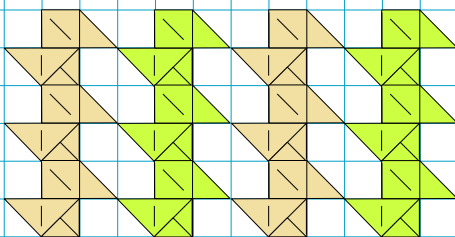
A1-3



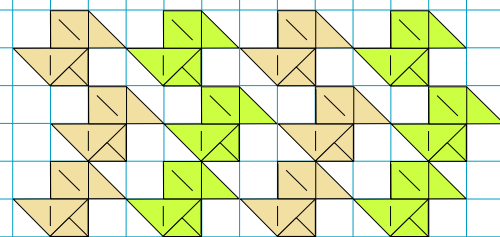
A1-4



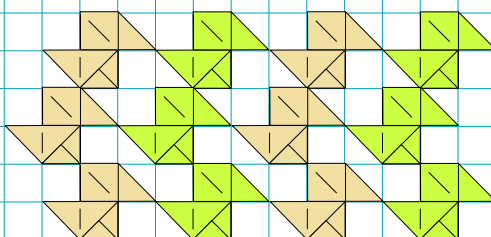
A1-5



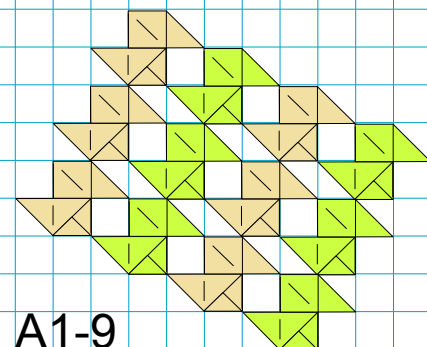
A1-6



A1-7

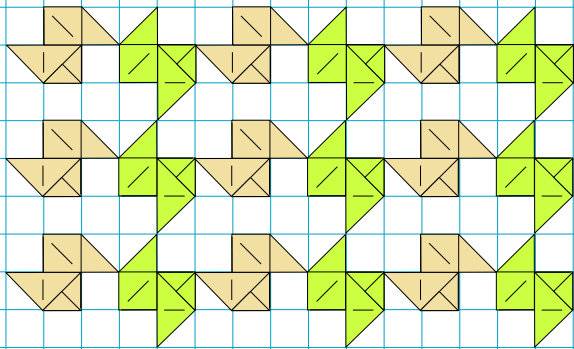


A1-8

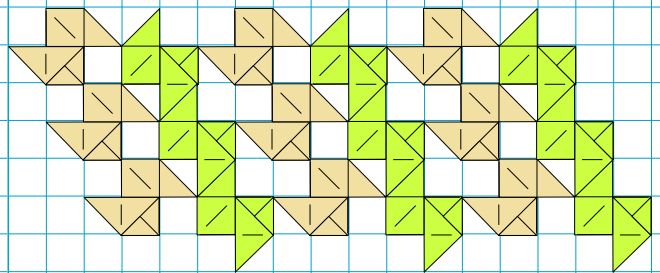


A1-9

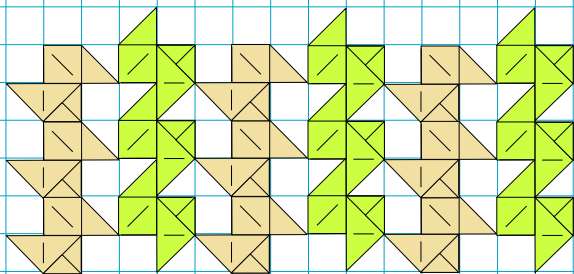
$$A2 = \text{[brown triangle]} + \text{[green triangle]}$$



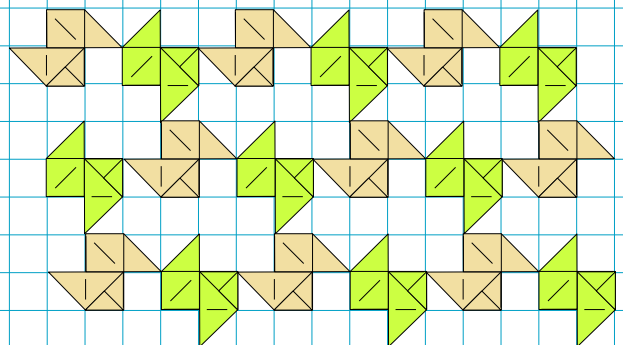
A2-1



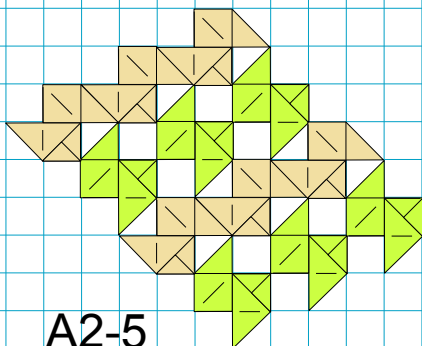
A2-2



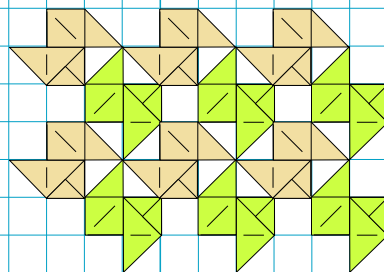
A2-3



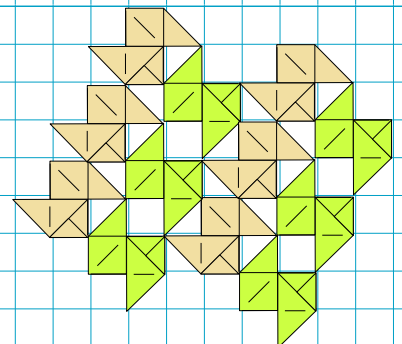
A2-4



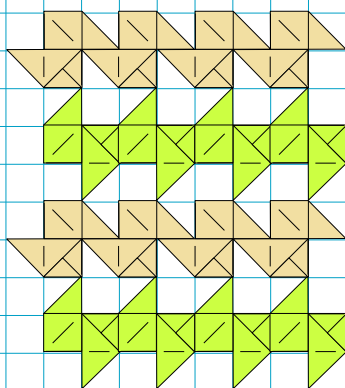
A2-5



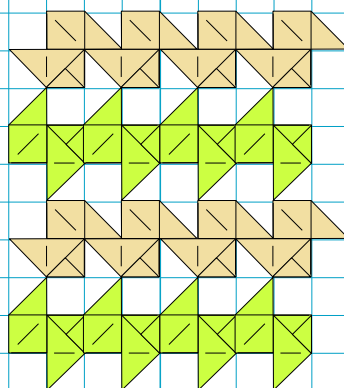
A2-6



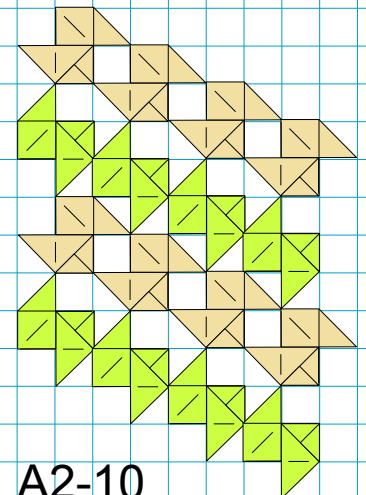
A2-7



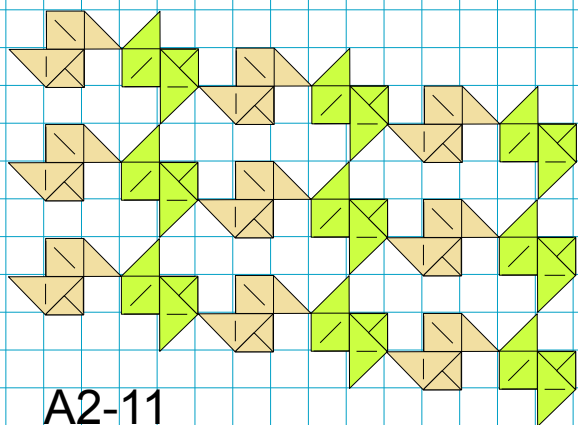
A2-8



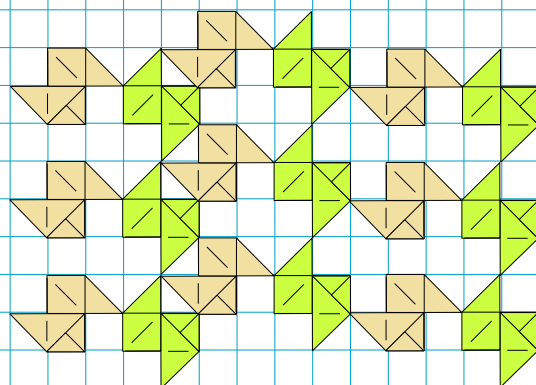
A2-9



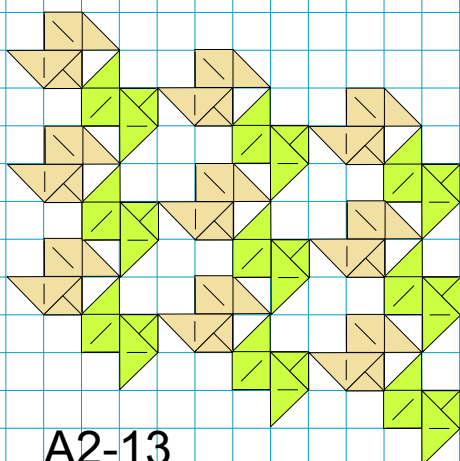
A2-10



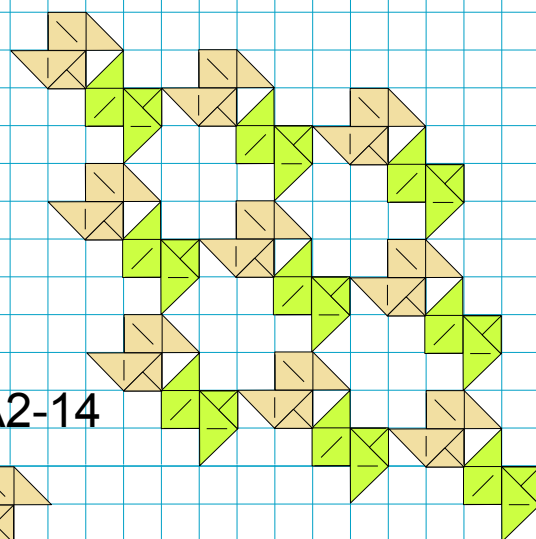
A2-11



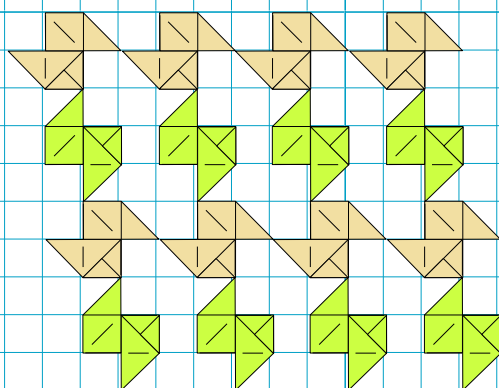
A2-12



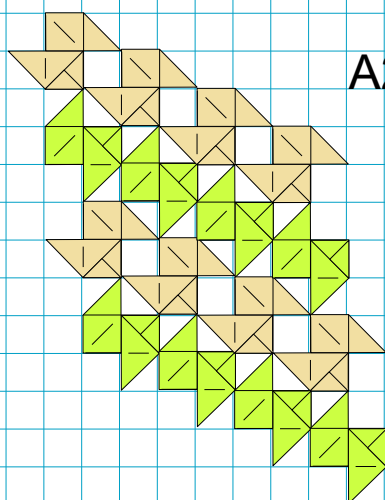
A2-13



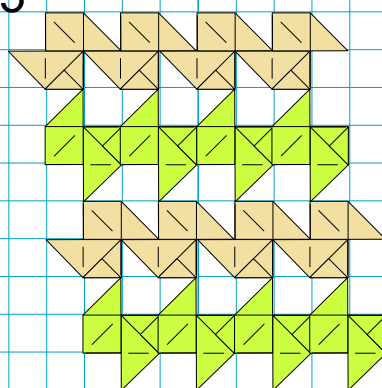
A2-14



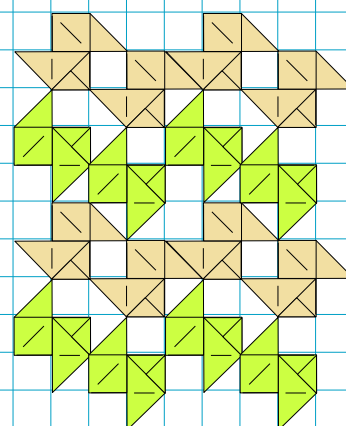
A2-15



A2-16



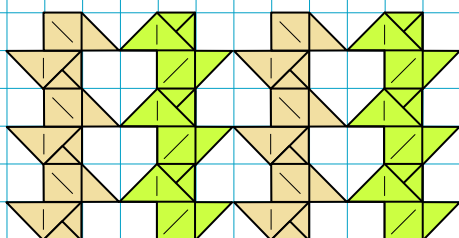
A2-17



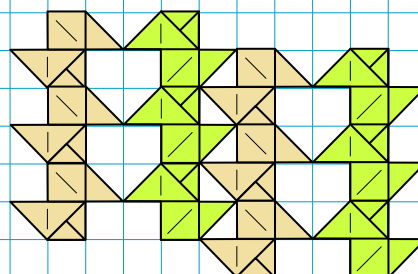
A2-18

B=MODULO BASE + MODULO BASE INVERSO

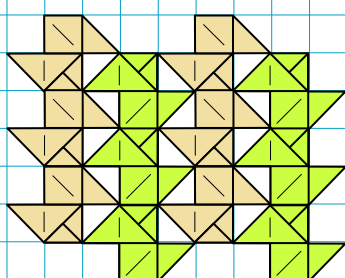
$$B1 = \text{[tan triangle]} + \text{[green triangle with arrow]}$$



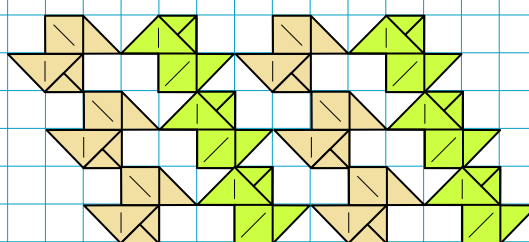
A2-19



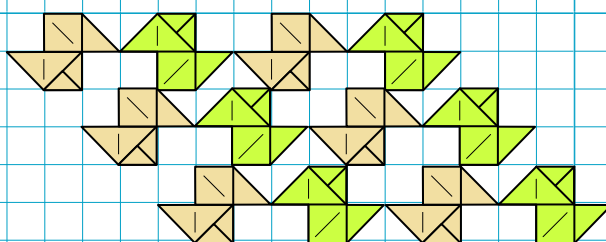
A2-20



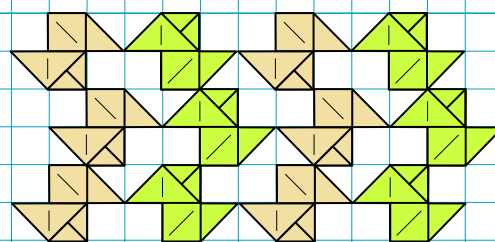
A2-21



A2-22

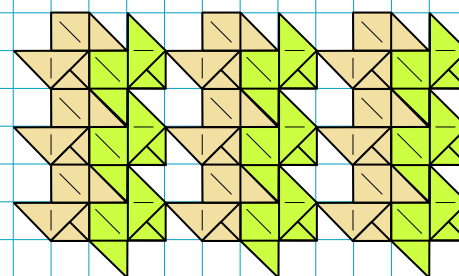
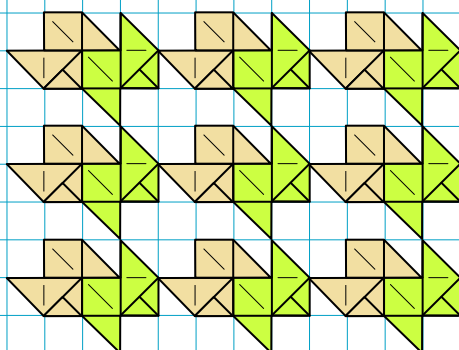


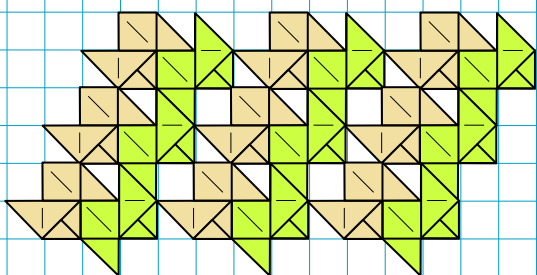
A2-23



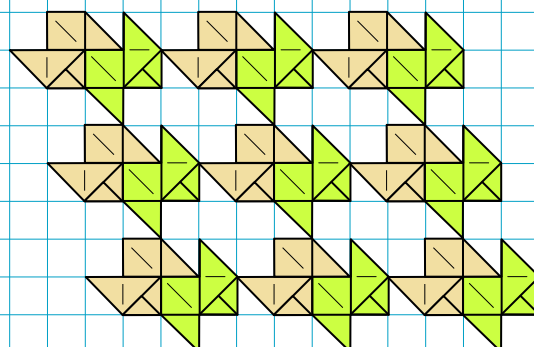
A2-24

$$B2 = \text{[tan triangle]} + \text{[green triangle with arrow]}$$

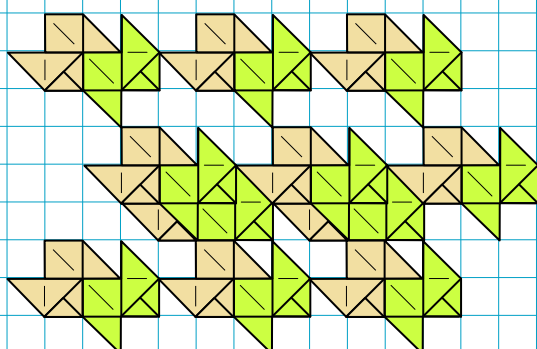




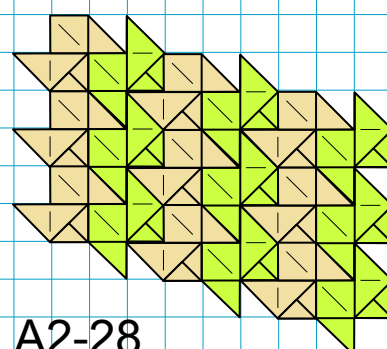
A2-25



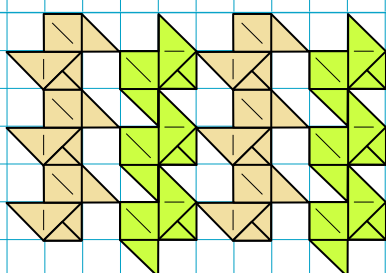
A2-26



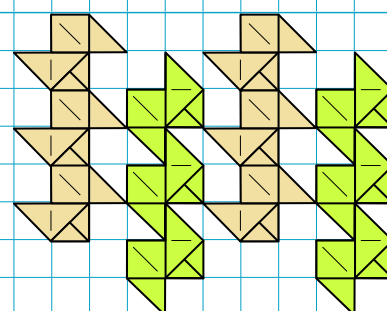
A2-27



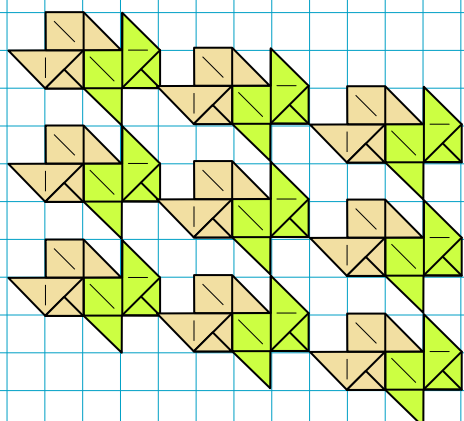
A2-28



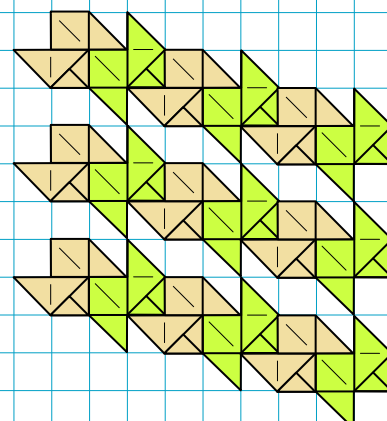
A2-29



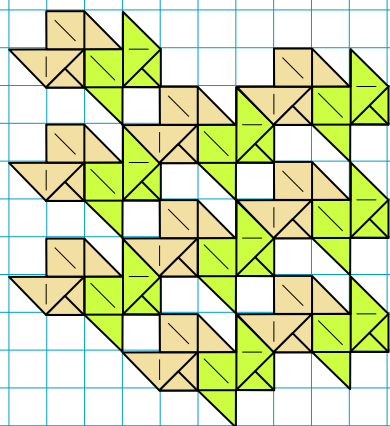
A2-30



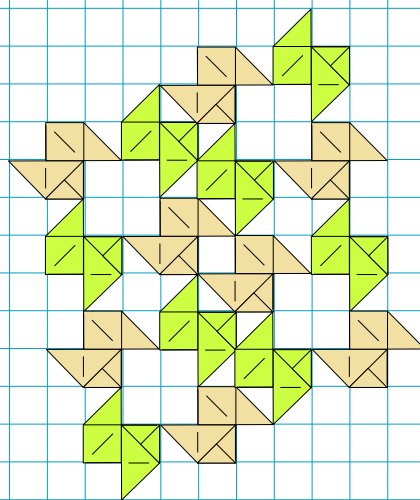
A2-31



A2-32

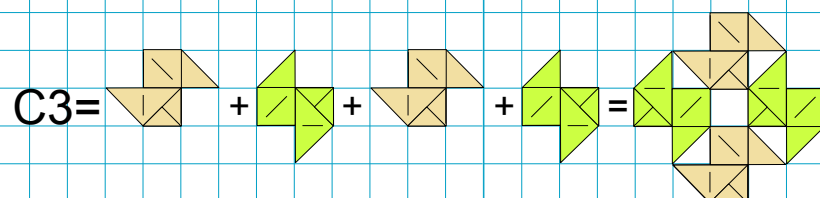
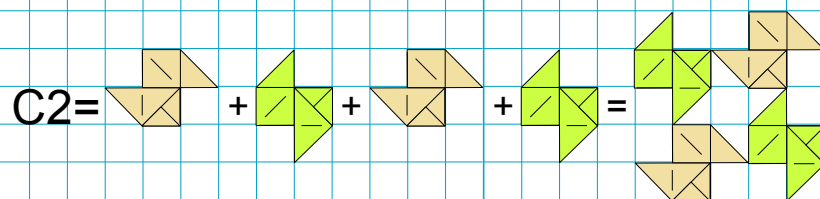
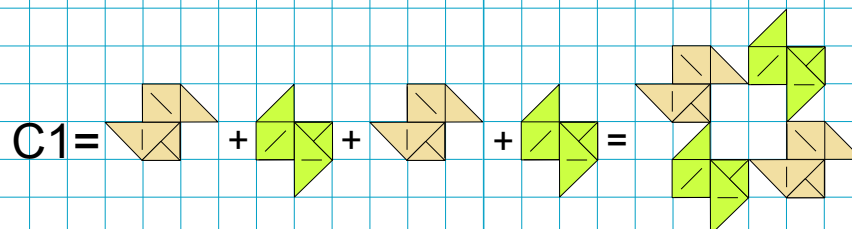


A2-33



A2-34-

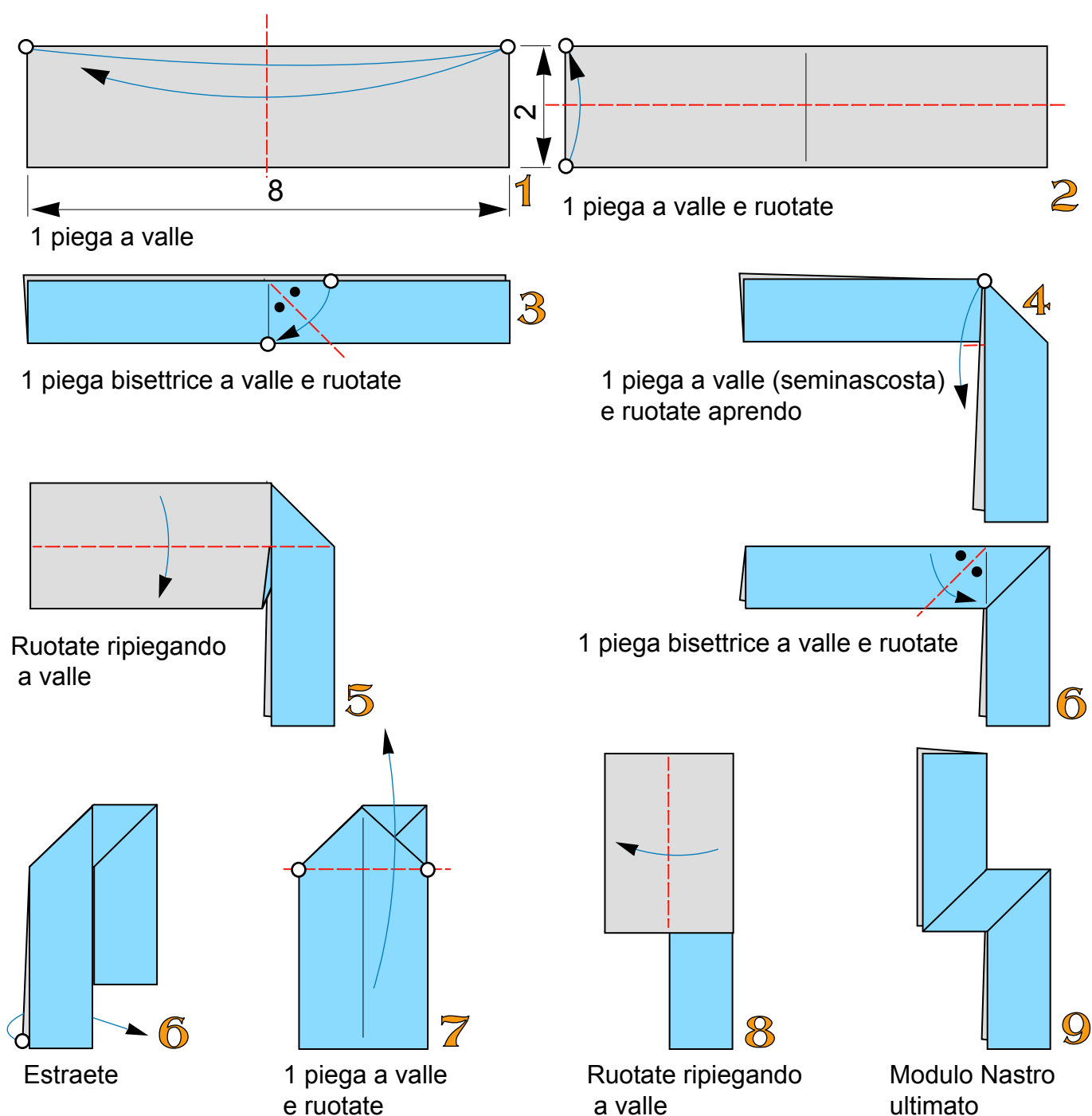
C=MODULO COMPOSTO DA 4 MODULI BASE



MODULO "NASTRO"

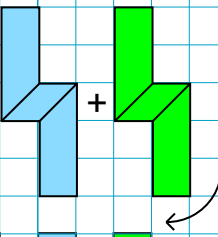
Per questo modulo ho eseguito aggregazioni di tipo A1, A2, B1, B2, C1, F1.
Per chi ne avesse voglia, è possibile proseguire con tutte le altre tipologie d'intervento.

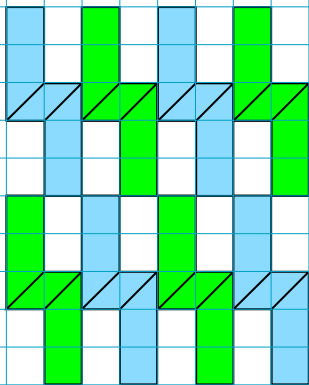
Adoperate fogli rettangolari 4x1 monocolori, di colore differente, di 8 cm di lato.



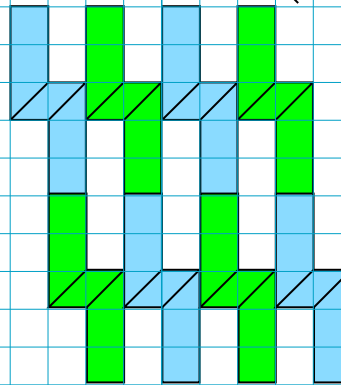
NASTRO - COMPOSIZIONI MODULARI

A= 2 MODULI BASE

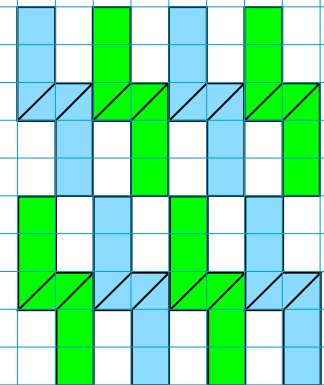
A1= 



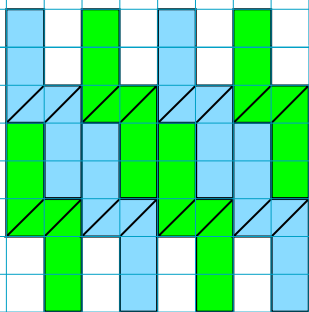
A1-1



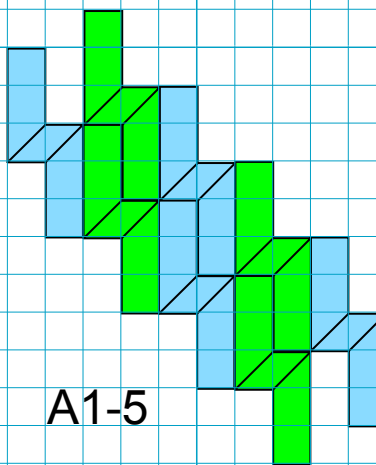
A1-2



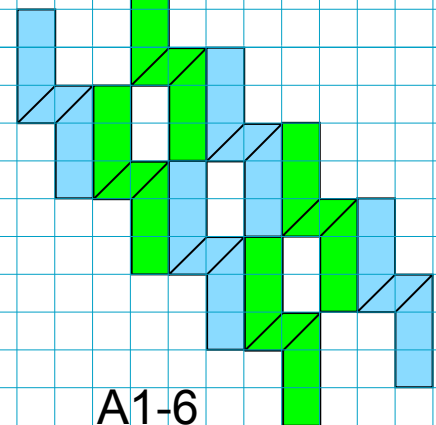
A1-3



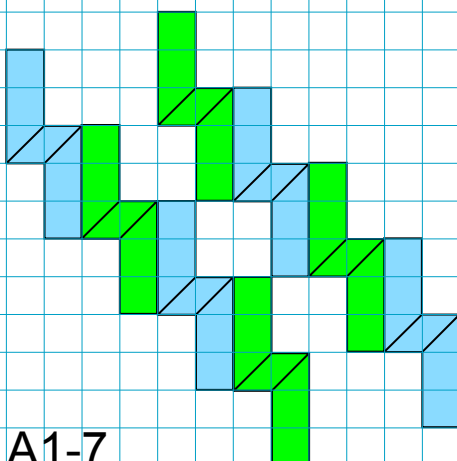
A1-4



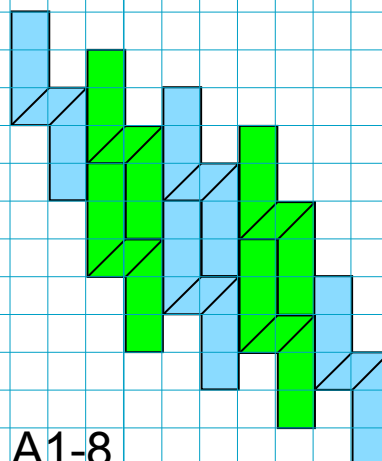
A1-5



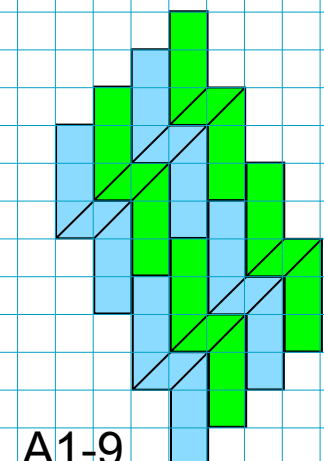
A1-6



A1-7



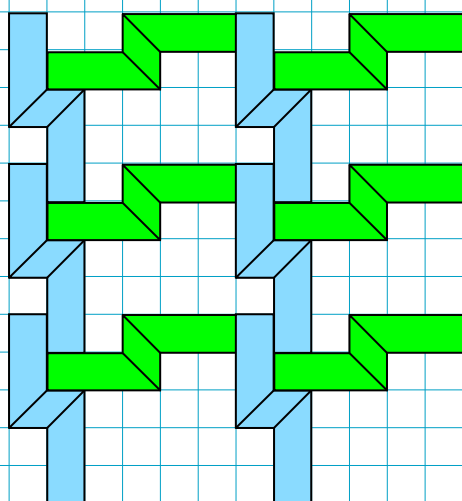
A1-8



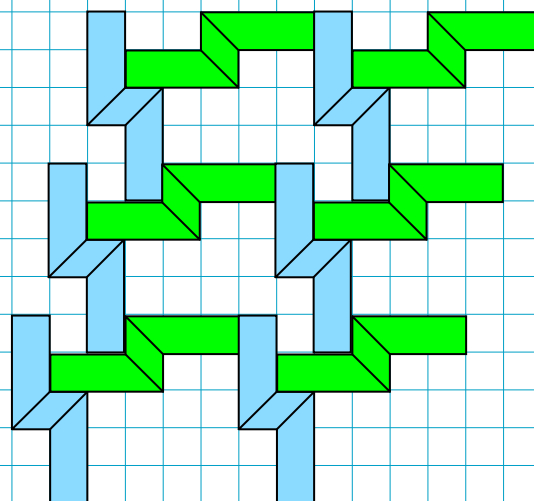
A1-9

$$A2 = \text{blue L-shape} + \text{green L-shape}$$

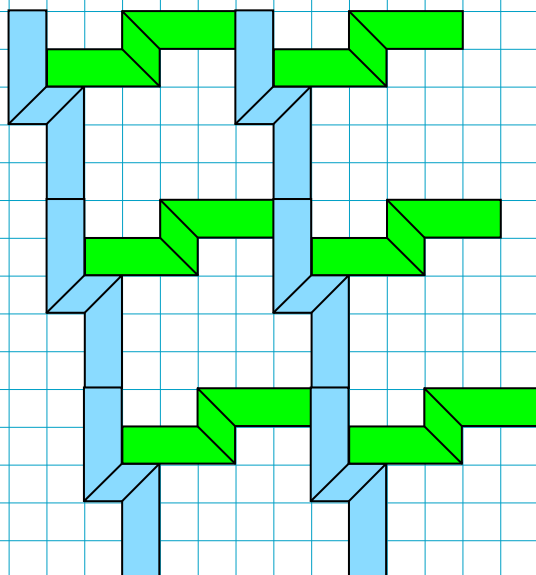
The diagram shows the equation $A2 =$ followed by a blue L-shaped block (a vertical bar of 3 units with a horizontal bar of 2 units at the bottom) and a plus sign, followed by a green L-shaped block (a horizontal bar of 3 units with a vertical bar of 2 units at the right end). A curved arrow points from the green block towards the right.



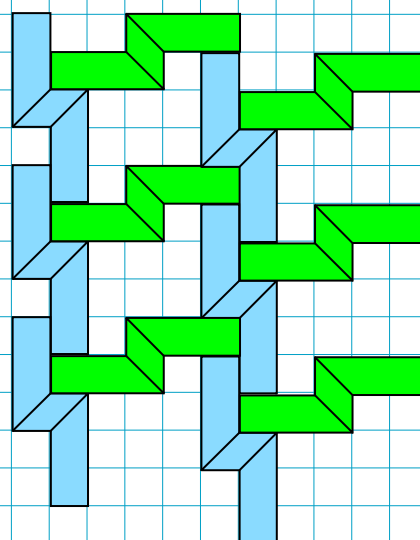
A2-1



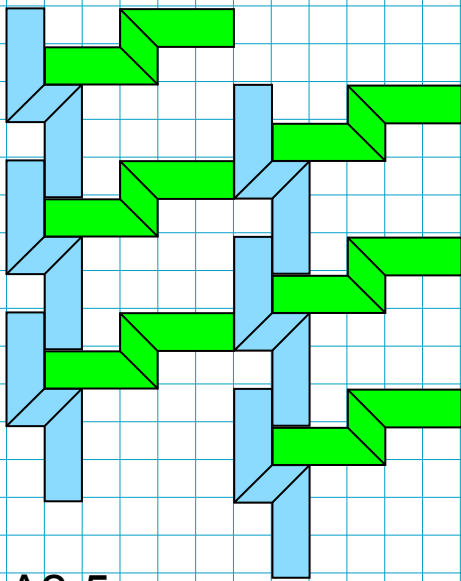
A2-2



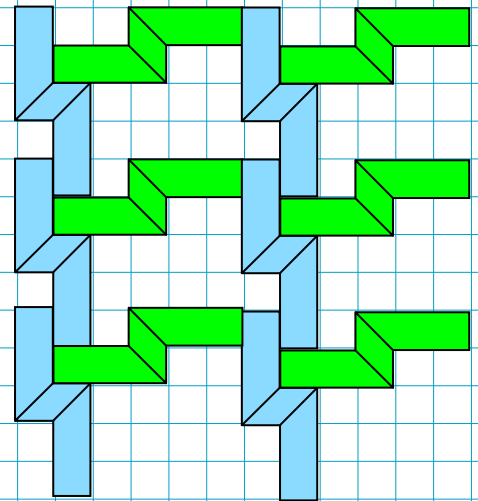
A2-3



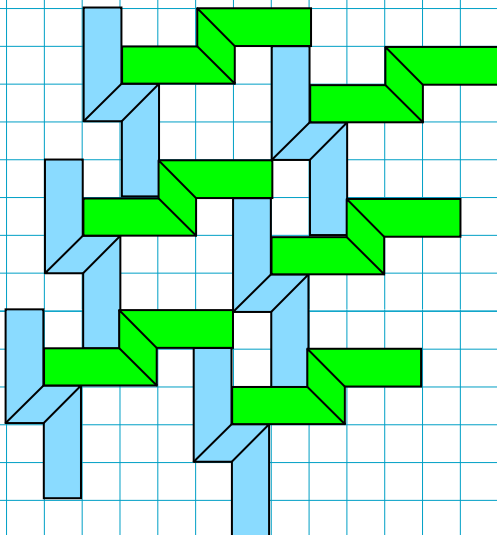
A2-4



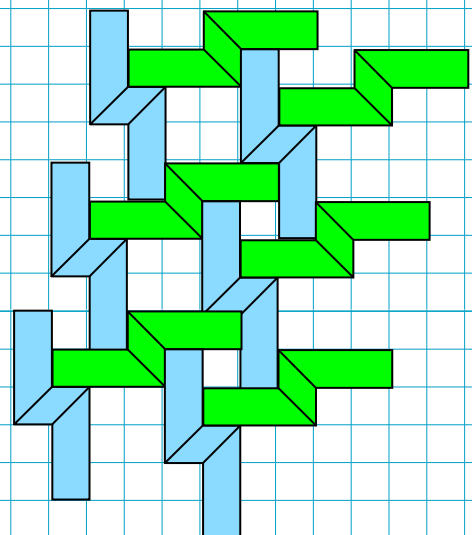
A2-5



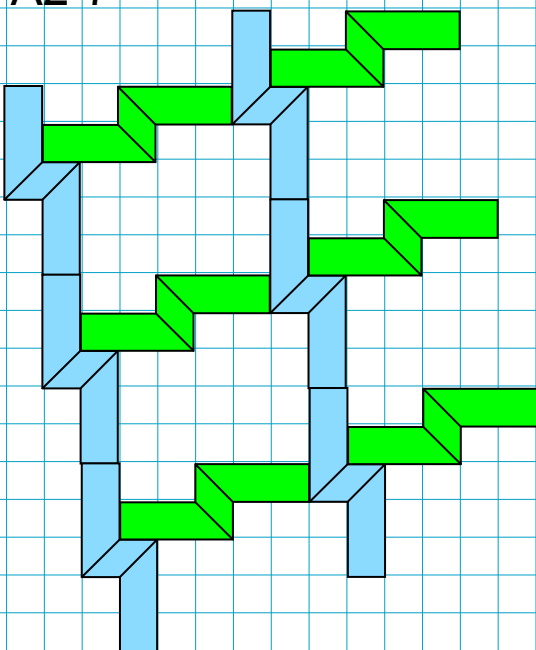
A2-6



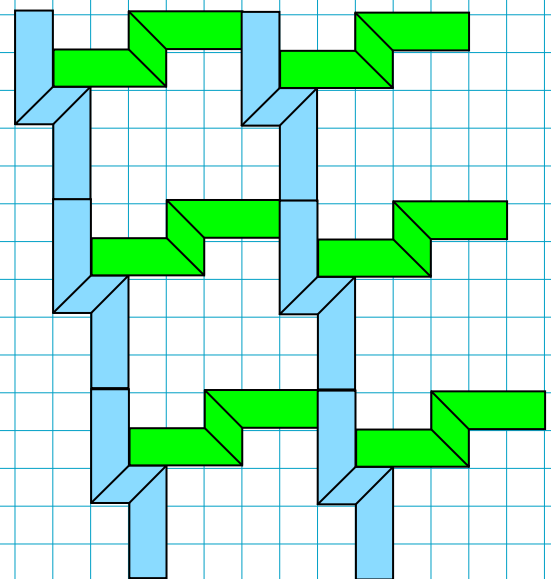
A2-7



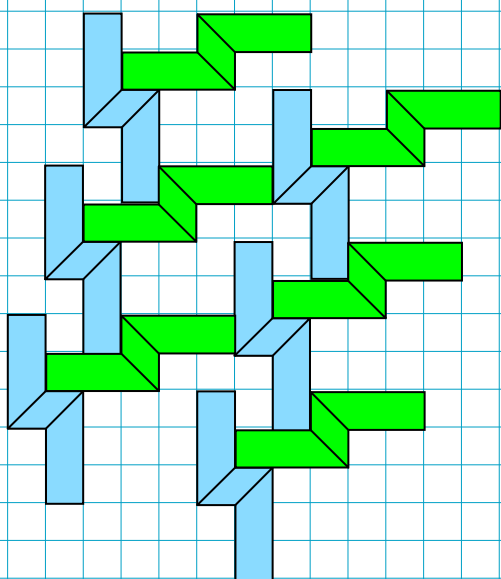
A2-8



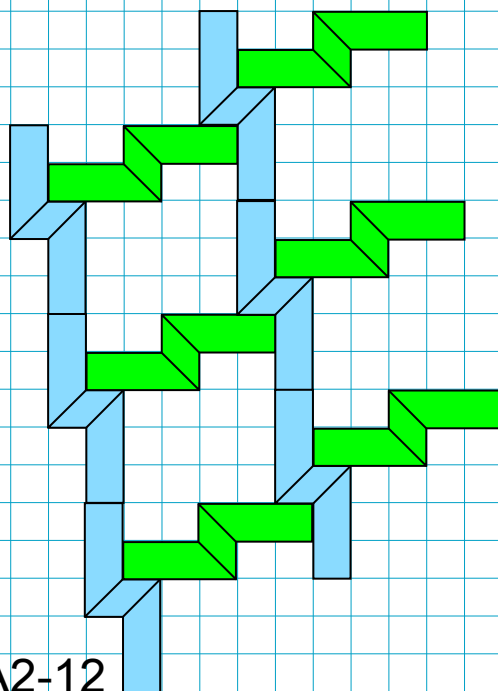
A2-9



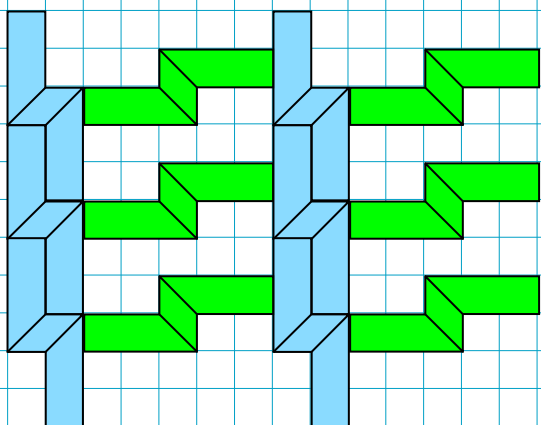
A2-10



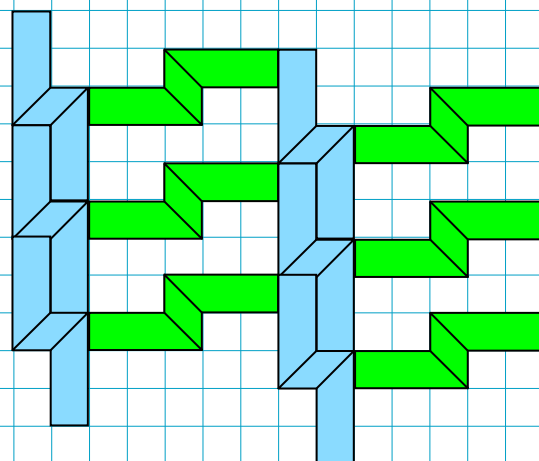
A2-11



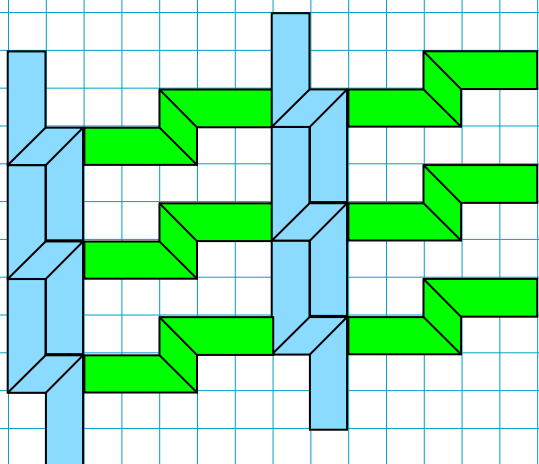
A2-12



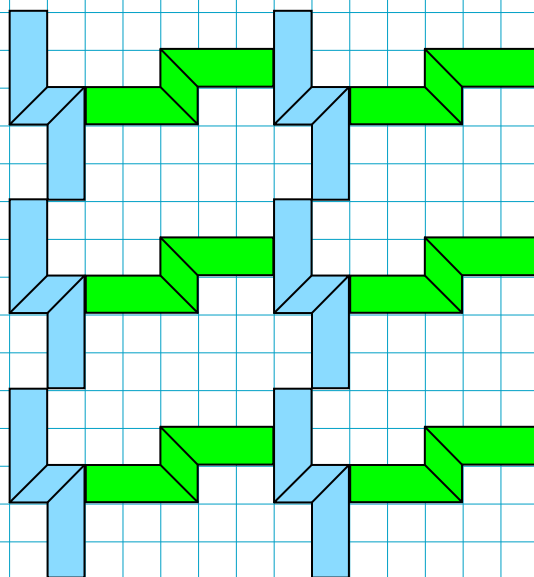
A2-13



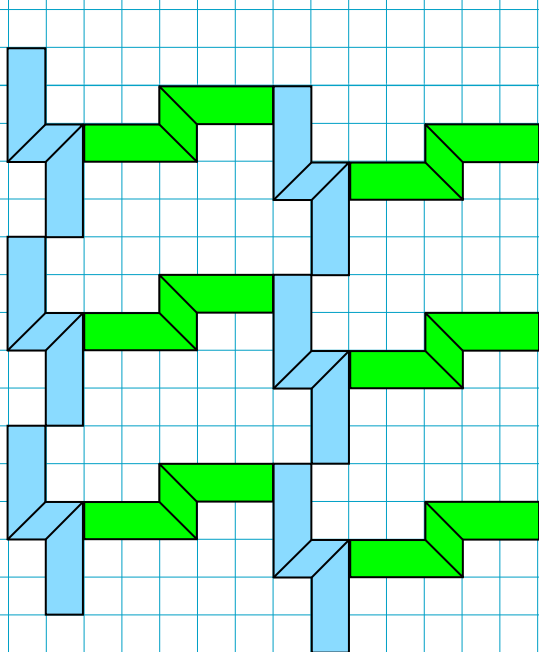
A2-14



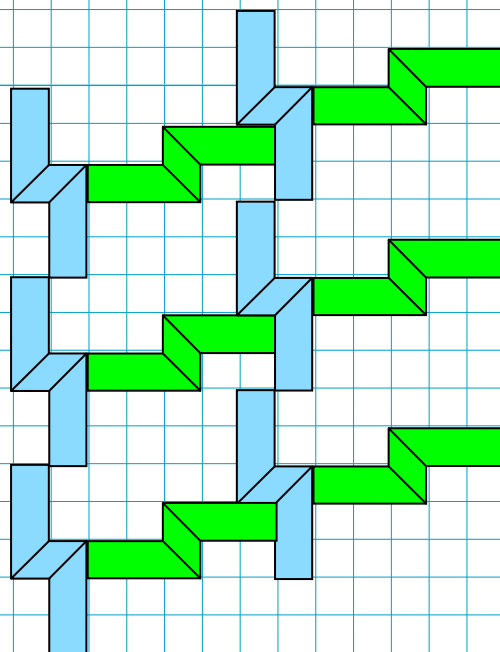
A2-15



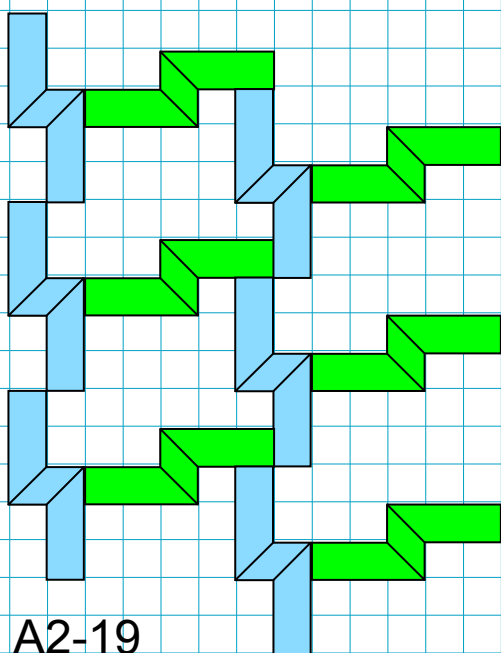
A2-16



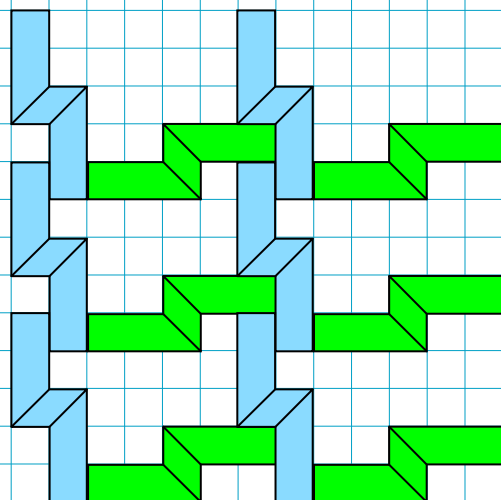
A2-17



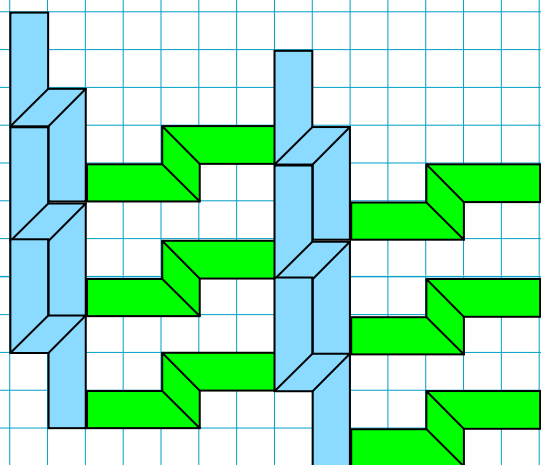
A2-18



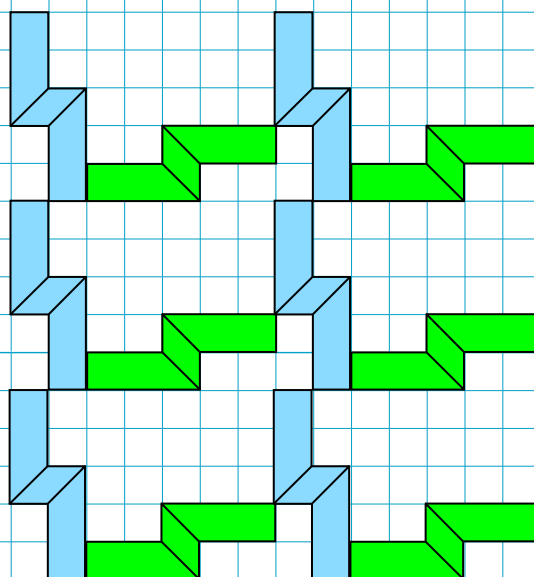
A2-19



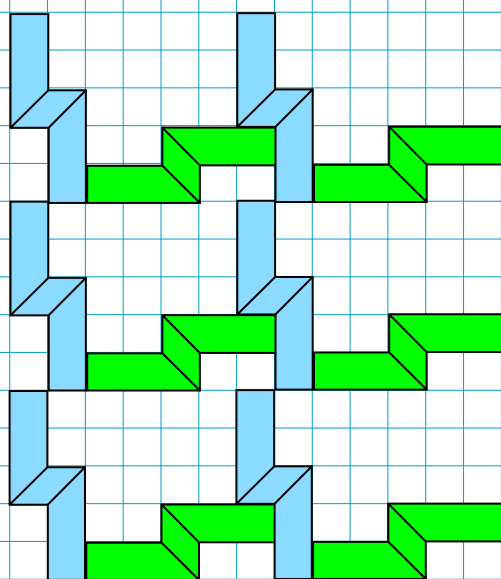
A2-20



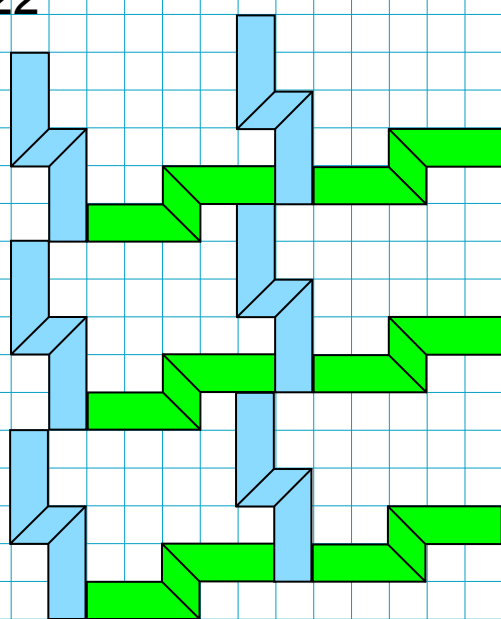
A2-21



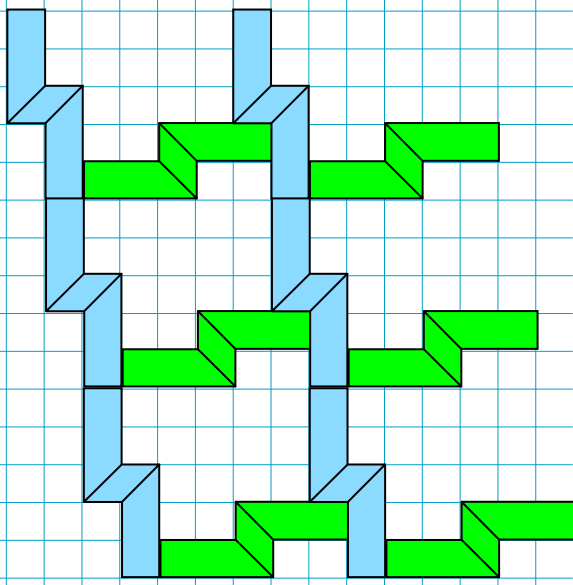
A2-22



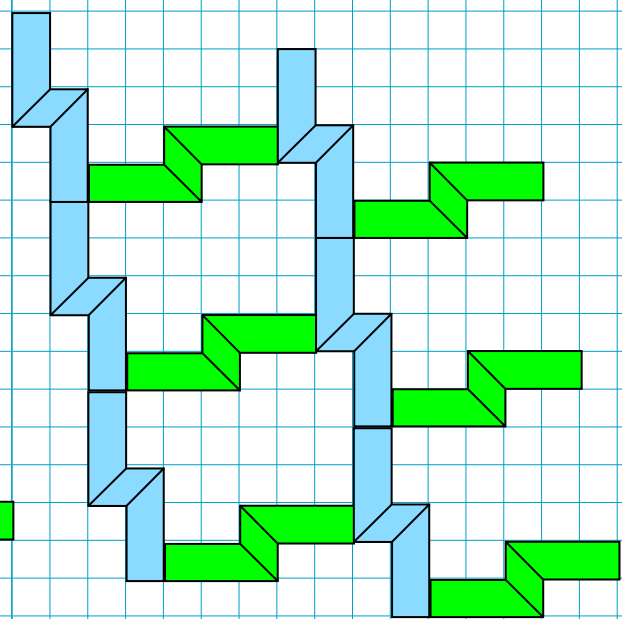
A2-23



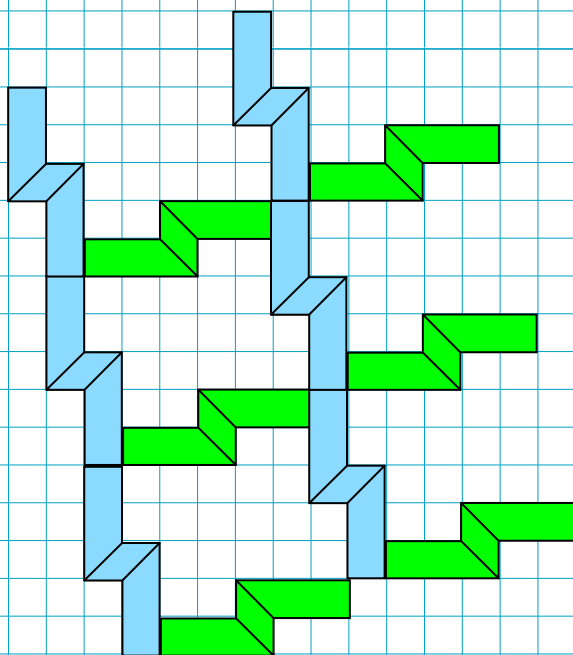
A2-24



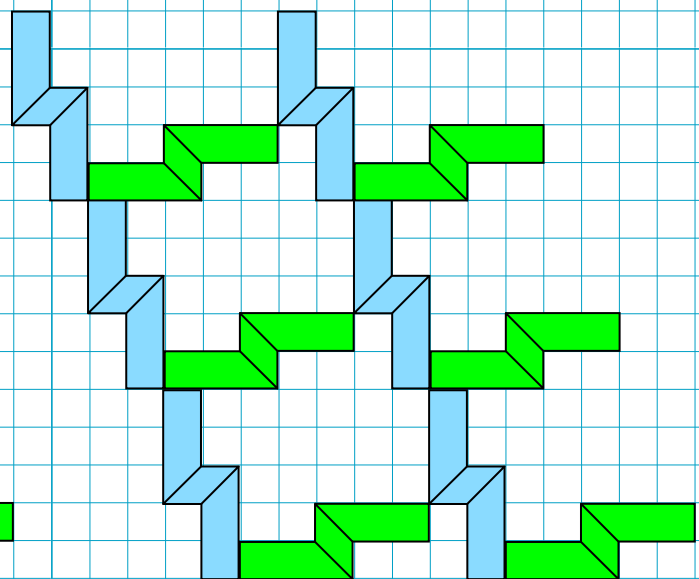
A2-25



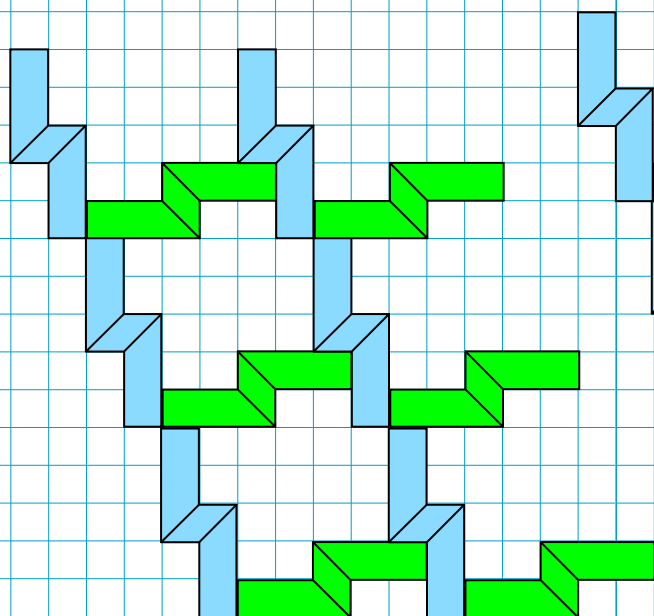
A2-26



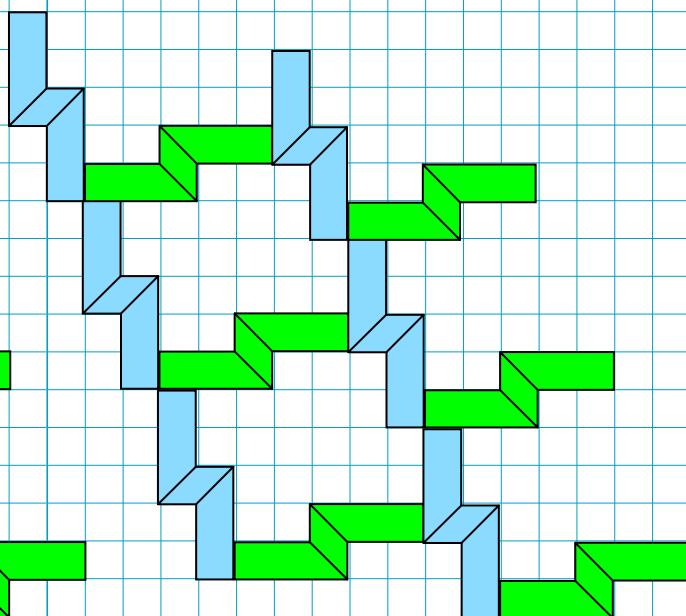
A2-27



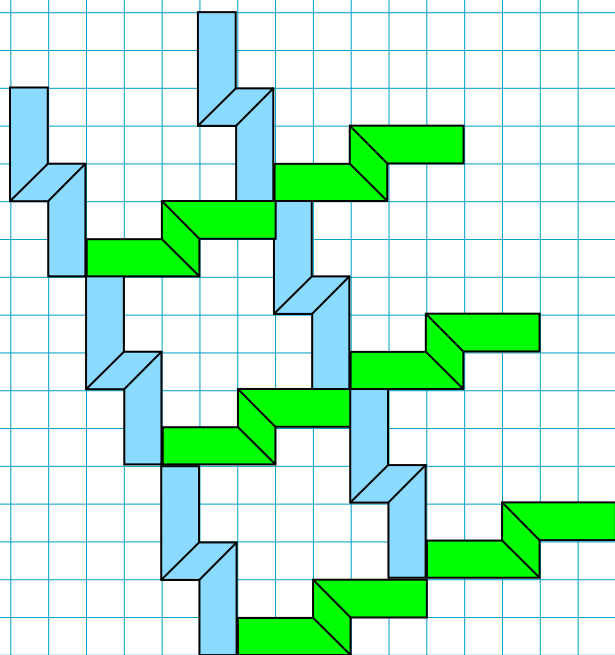
A2-28



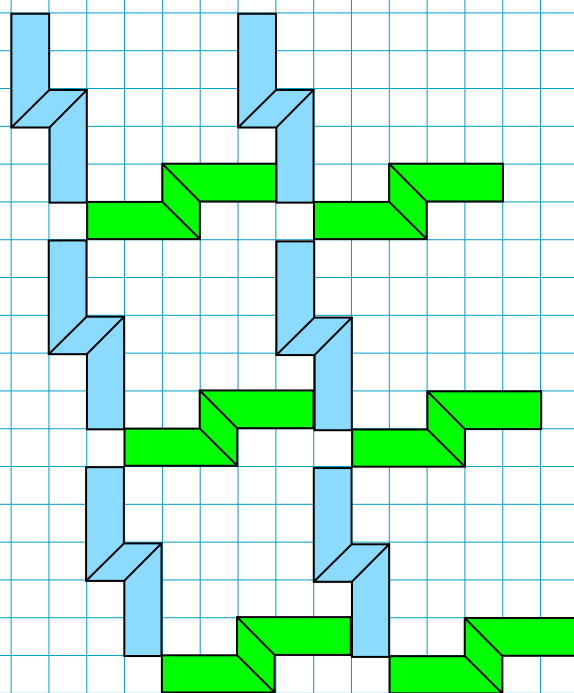
A2-29



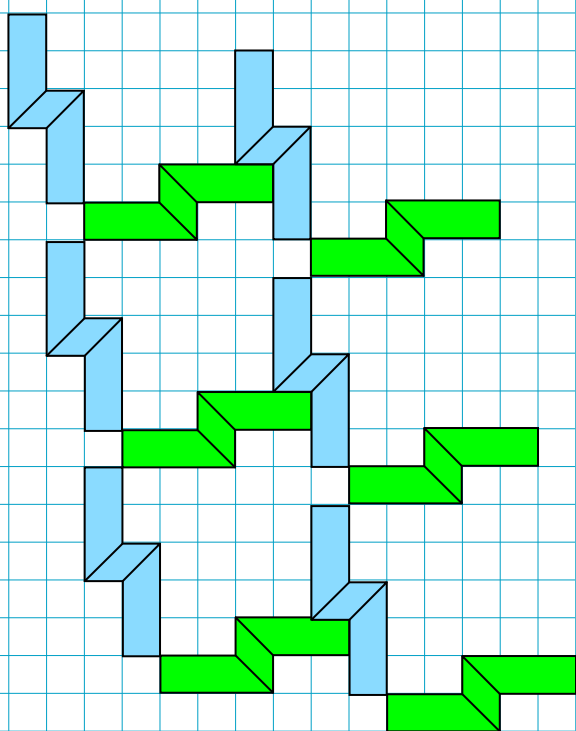
A2-30



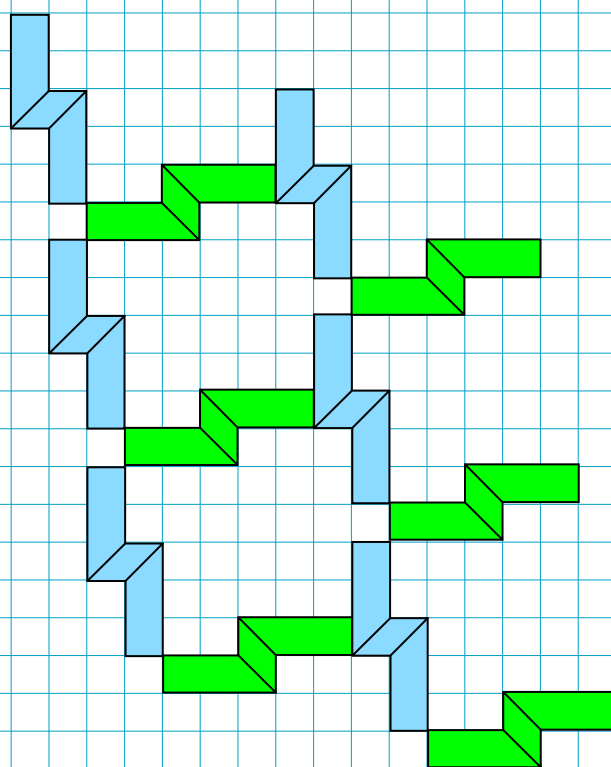
A2-31



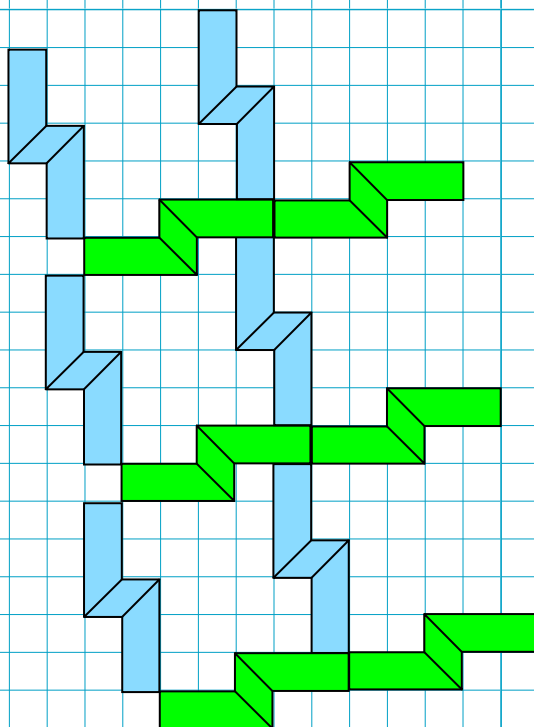
A2-32



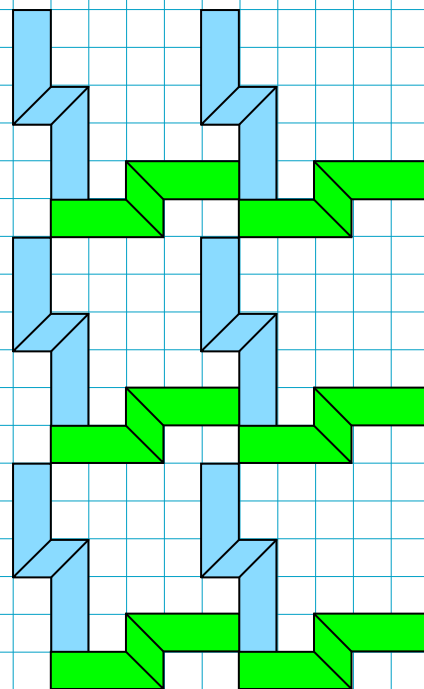
A2-33



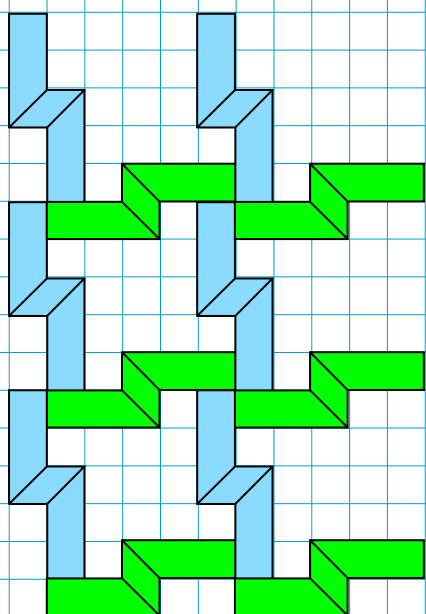
A2-34



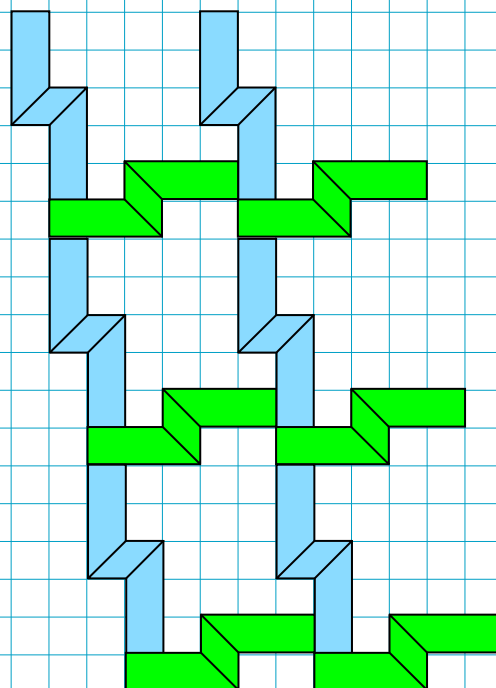
A2-35



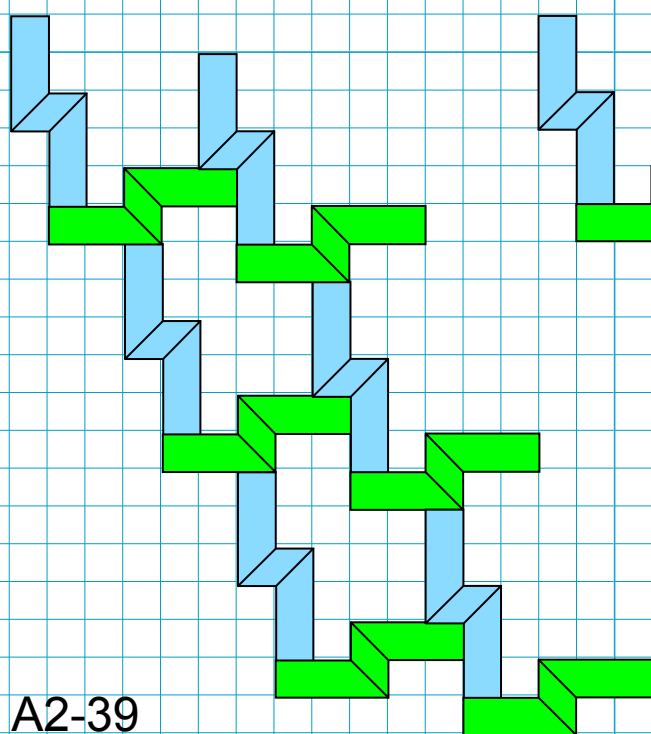
A2-36



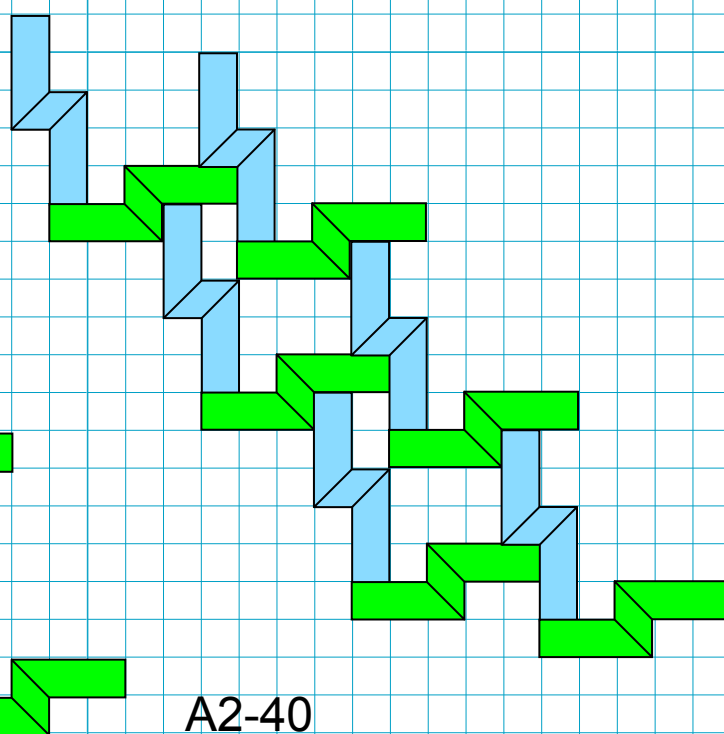
A2-37



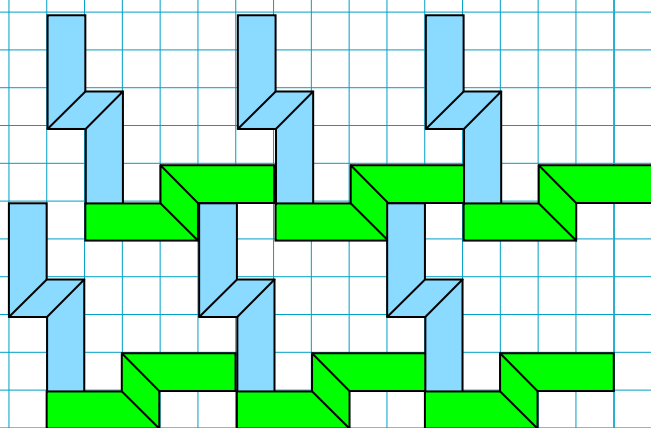
A2-38



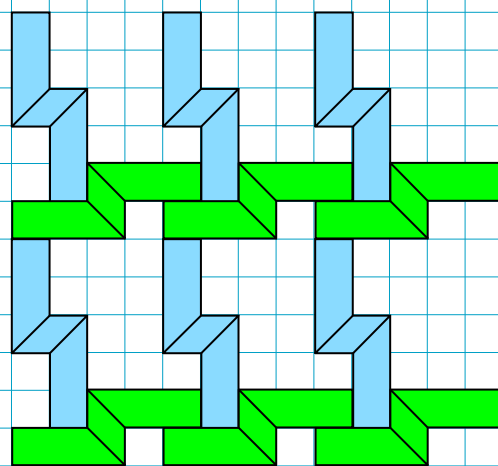
A2-39



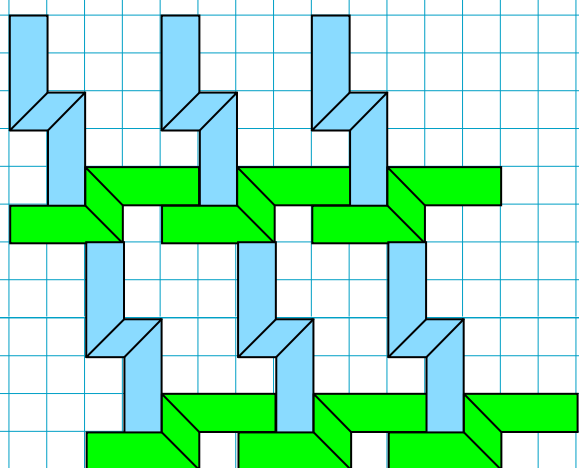
A2-40



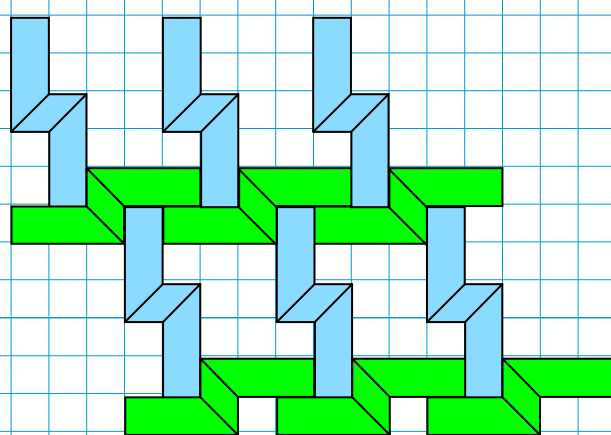
A2-41



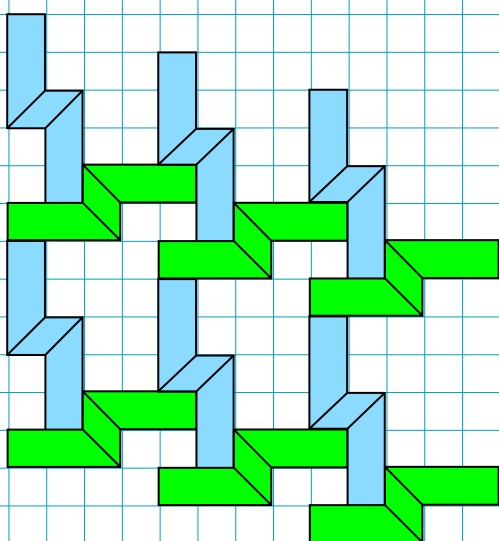
A2-42



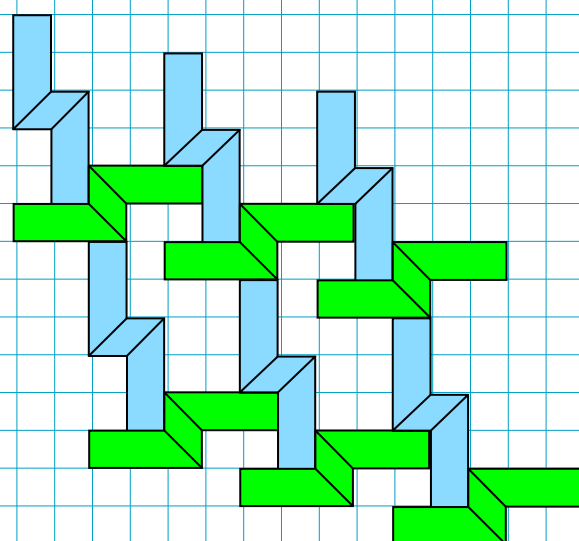
A2-43



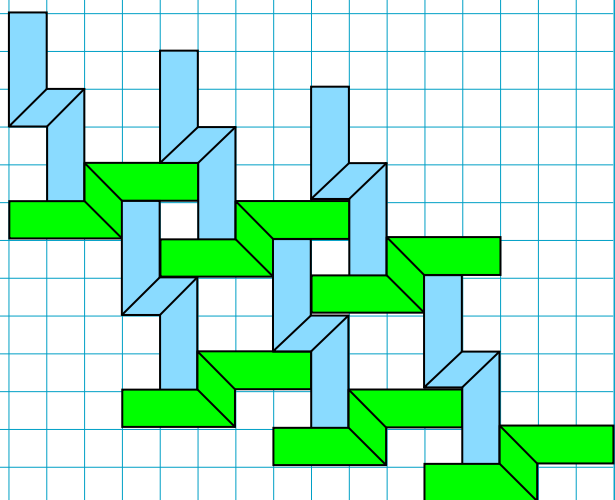
A2-44



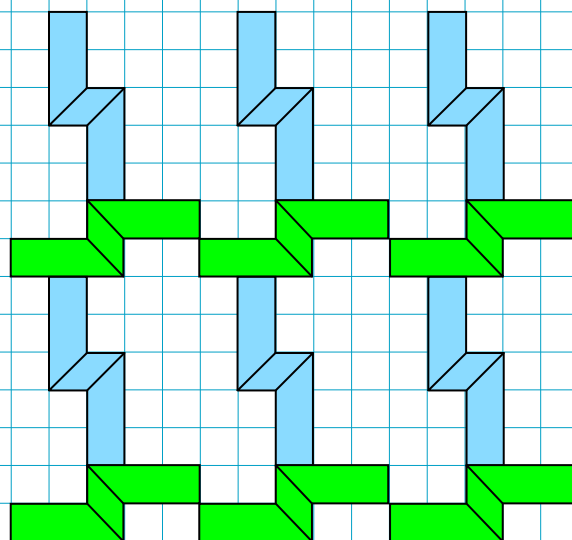
A2-45



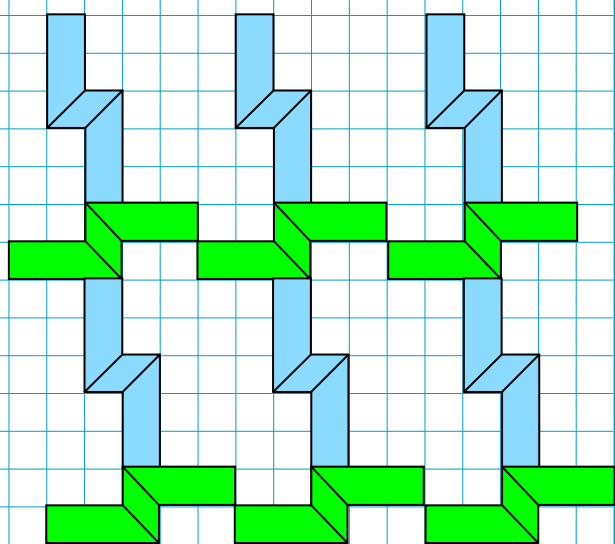
A2-46



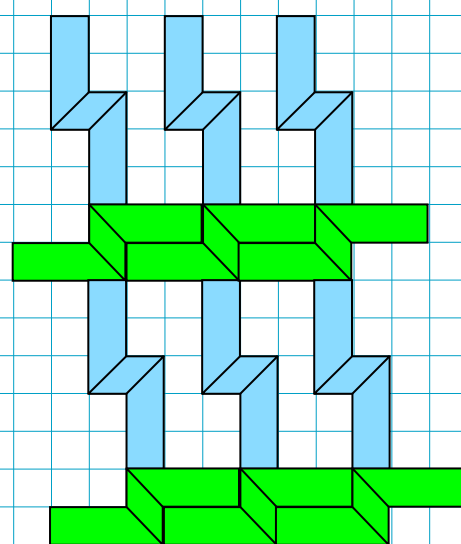
A2-47



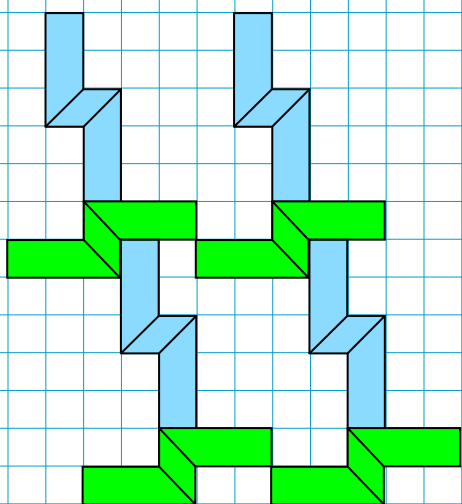
A2-48



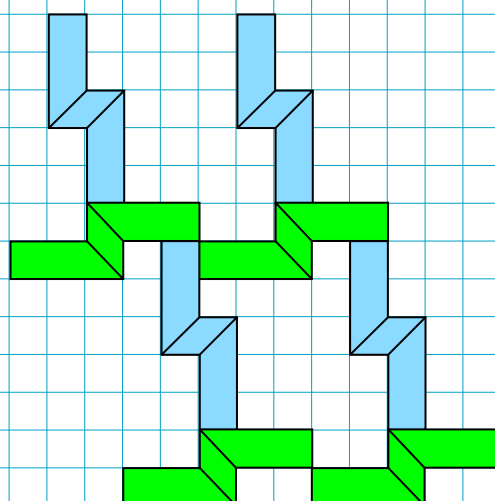
A2-49



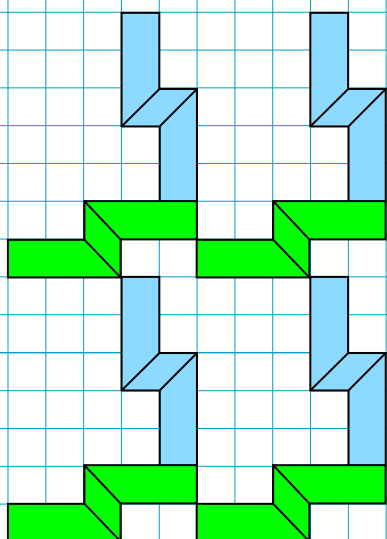
A2-50



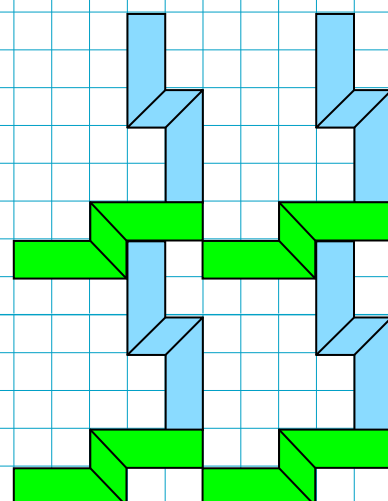
A2-51



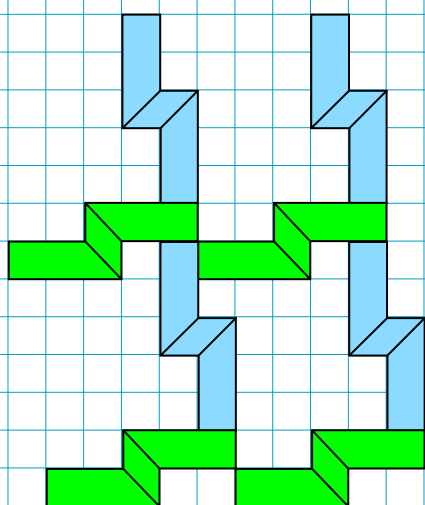
A2-52



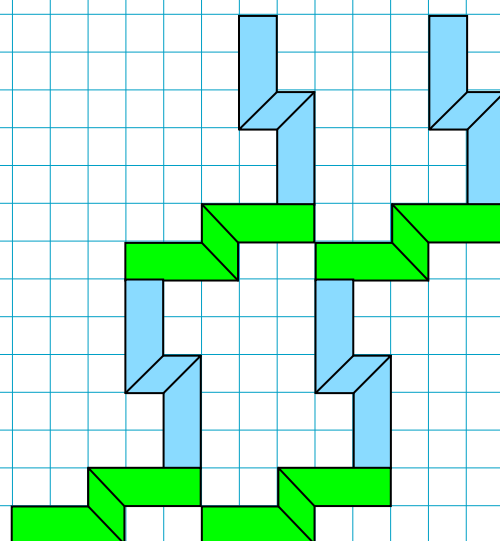
A2-53



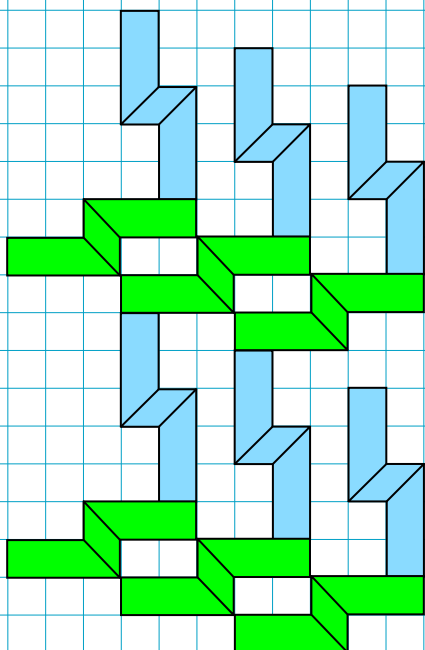
A2-54



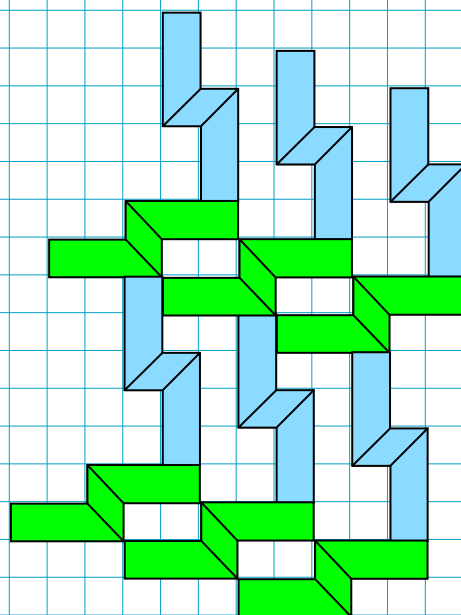
A2-55



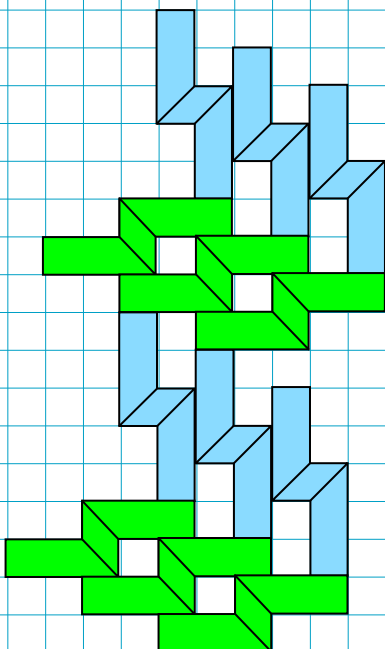
A2-56



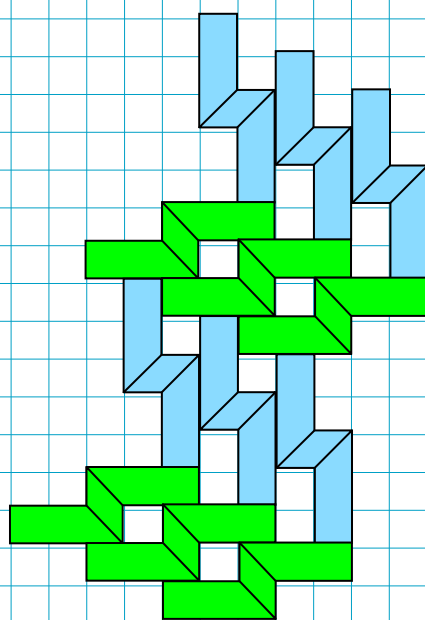
A2-57



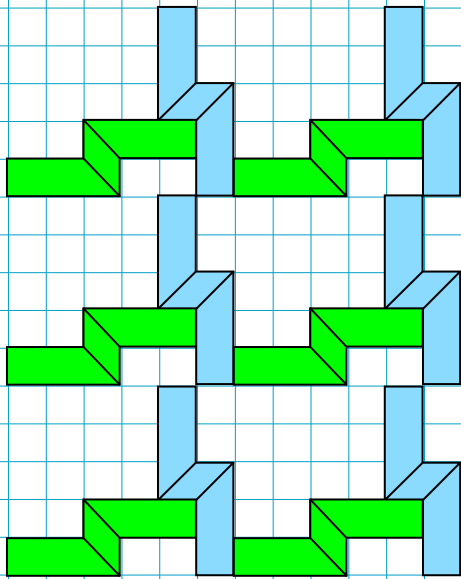
A2-58



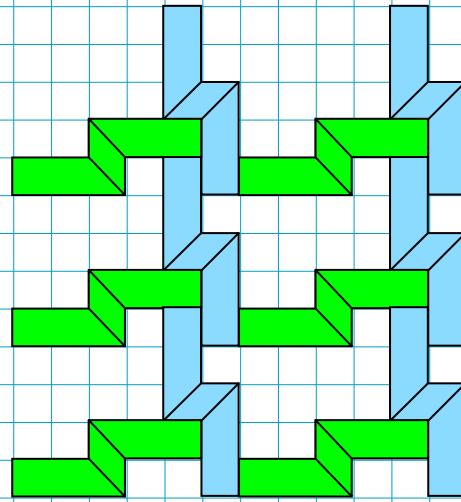
A2-59



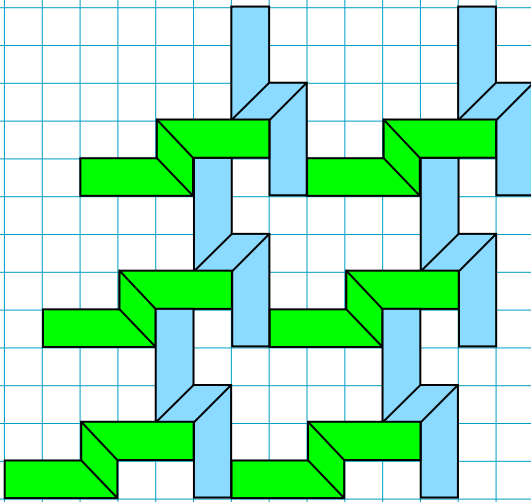
A2-60



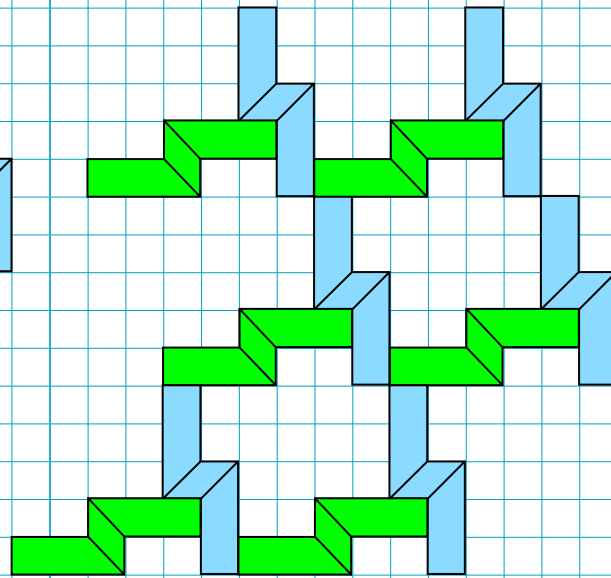
A2-61



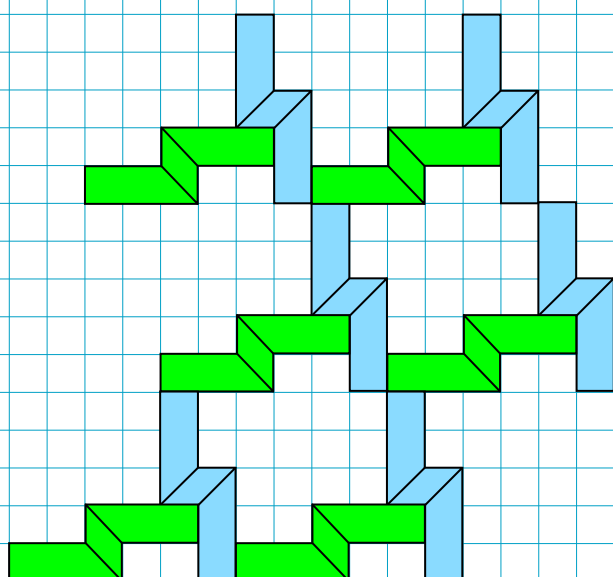
A2-62



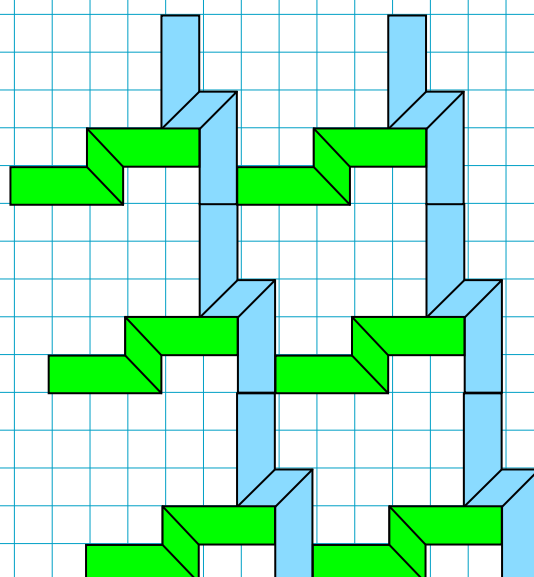
A2-63



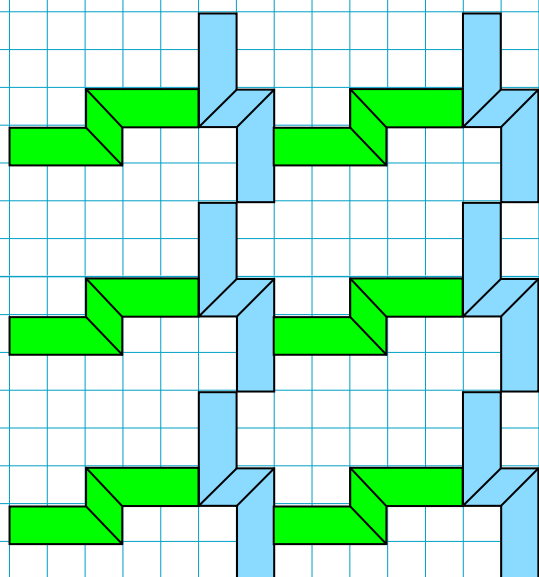
A2-63



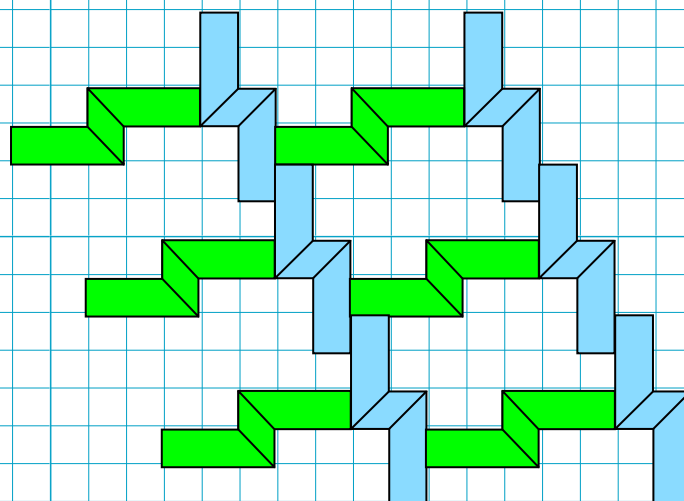
A2-64



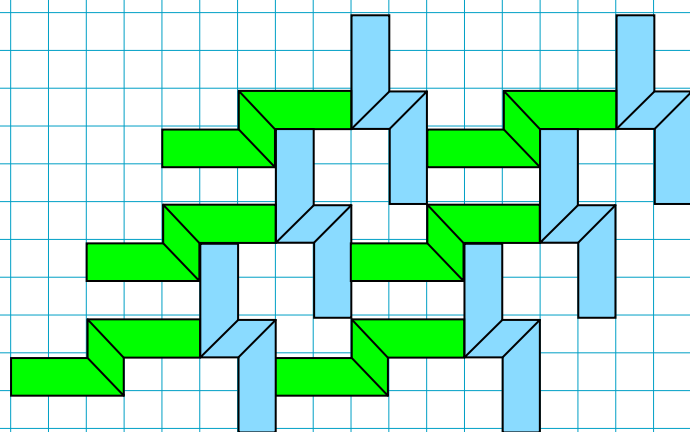
A2-65



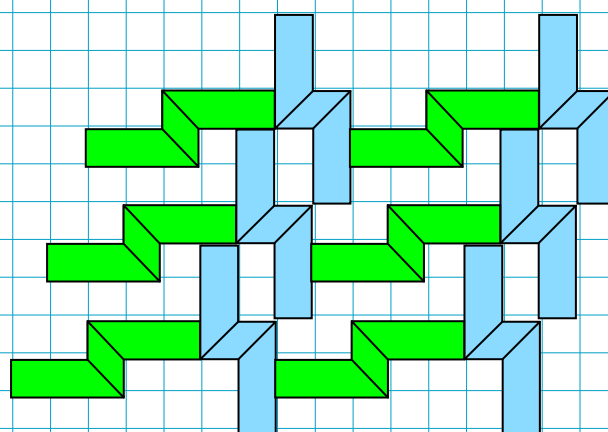
A2-66



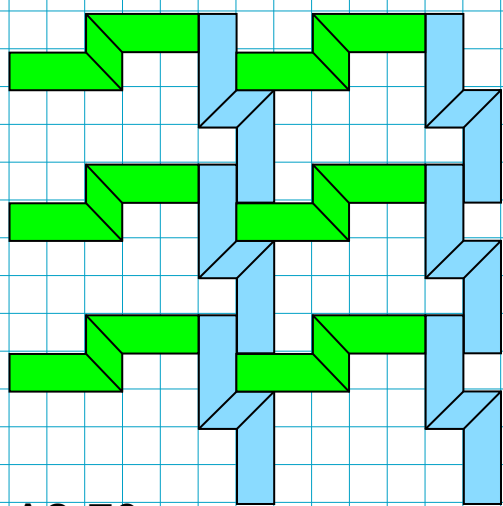
A2-67



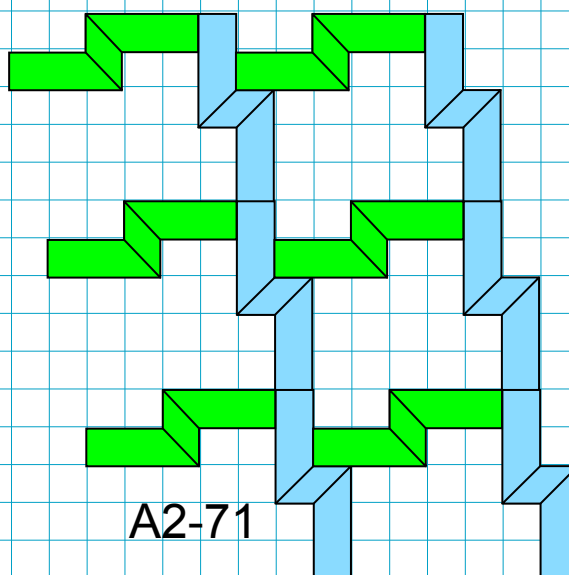
A2-68



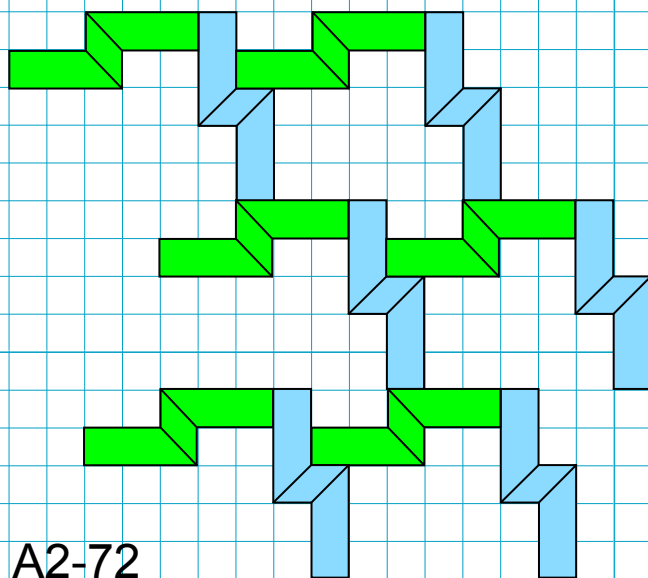
A2-69



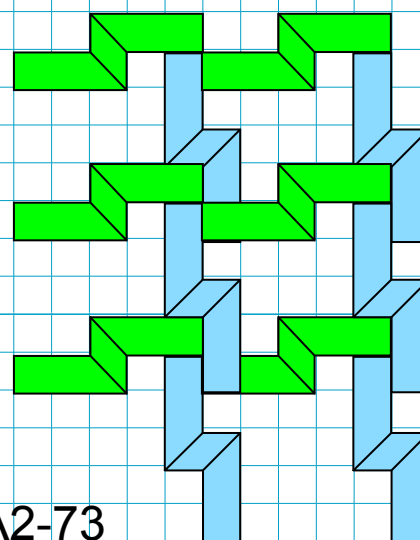
A2-70



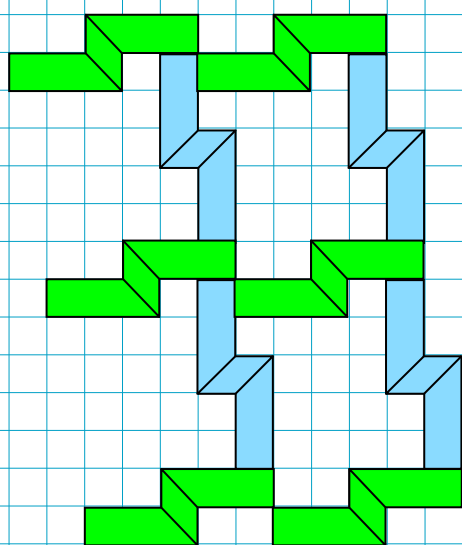
A2-71



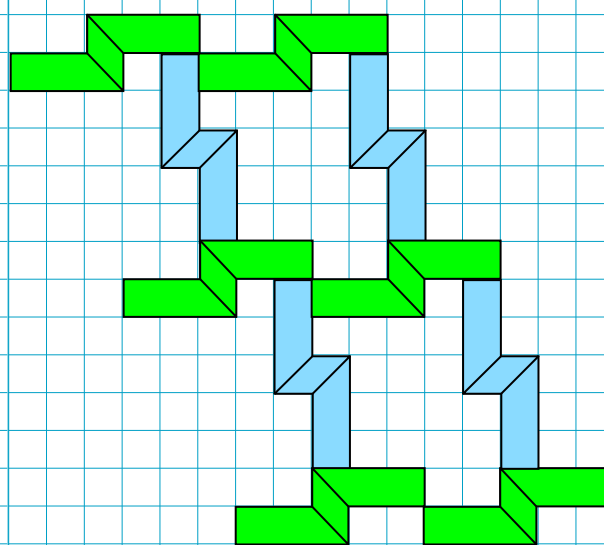
A2-72



A2-73

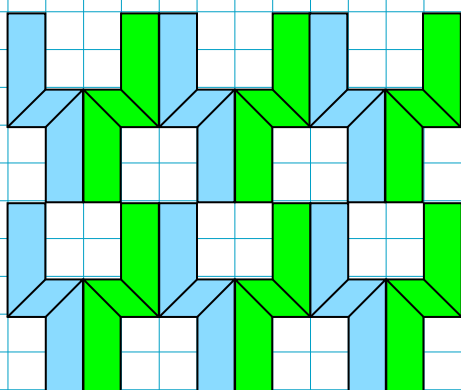
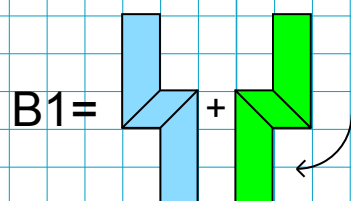


A2-74

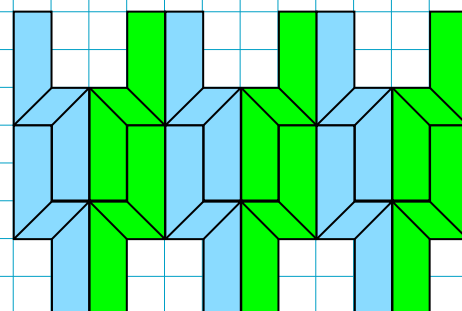


A2-75

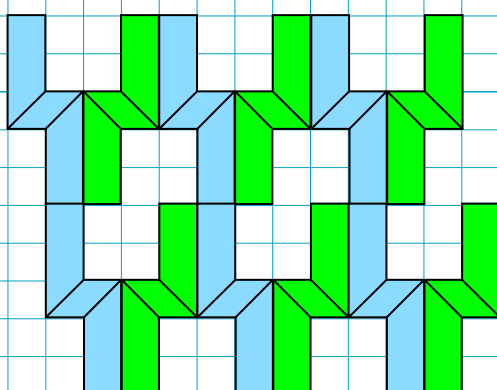
B=MODULO BASE + MODULO BASE INVERSO



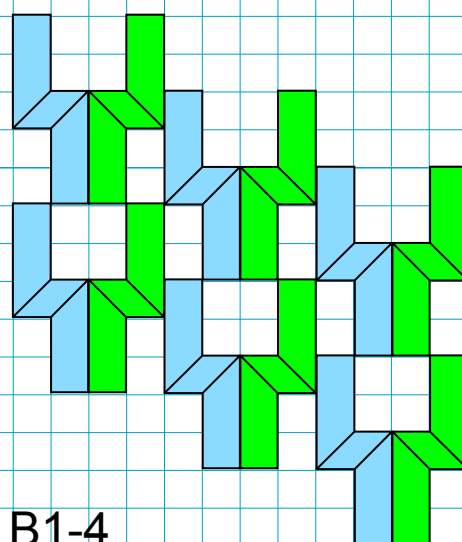
B1-1



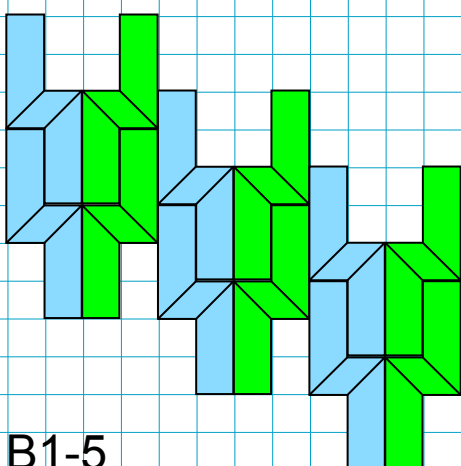
B1-2



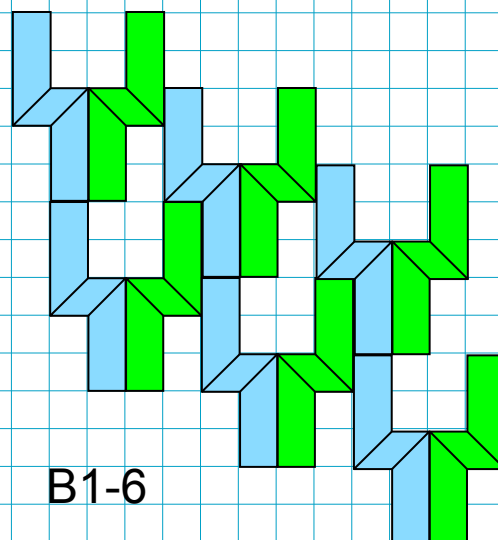
B1-3



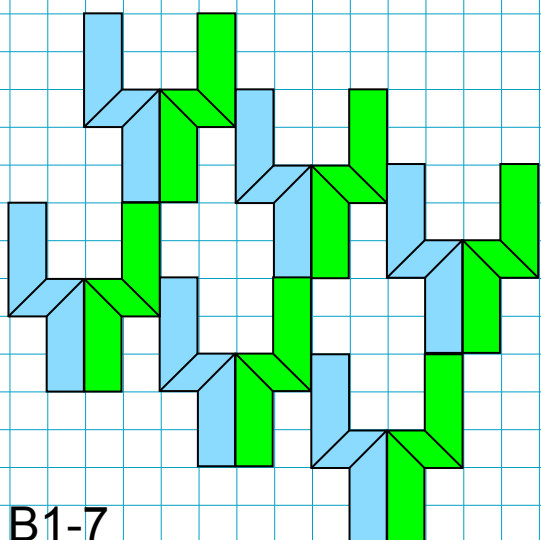
B1-4



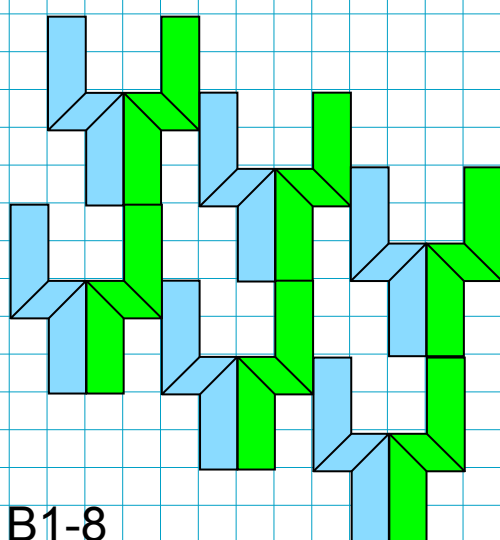
B1-5



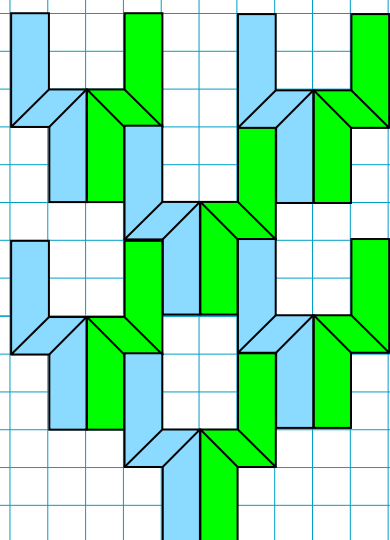
B1-6



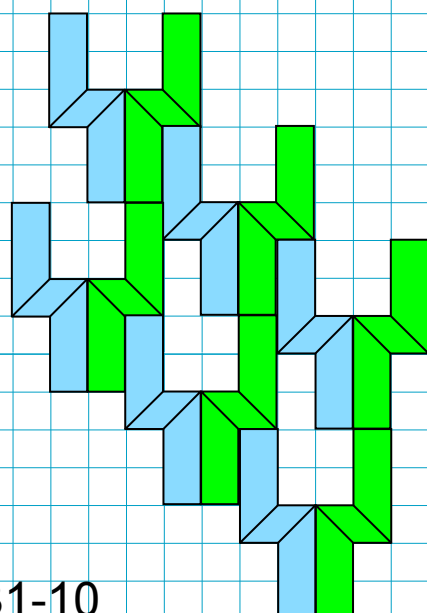
B1-7



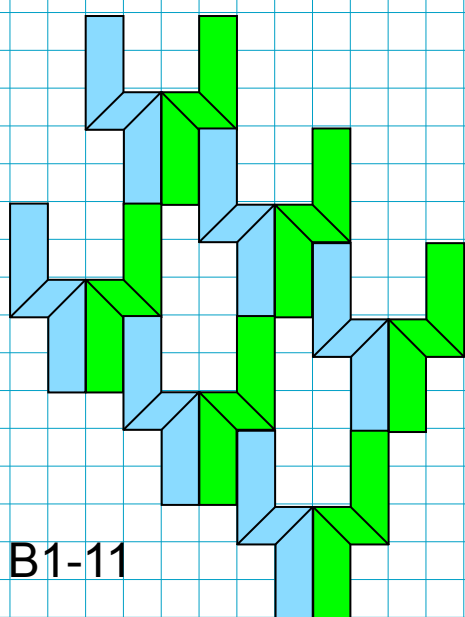
B1-8



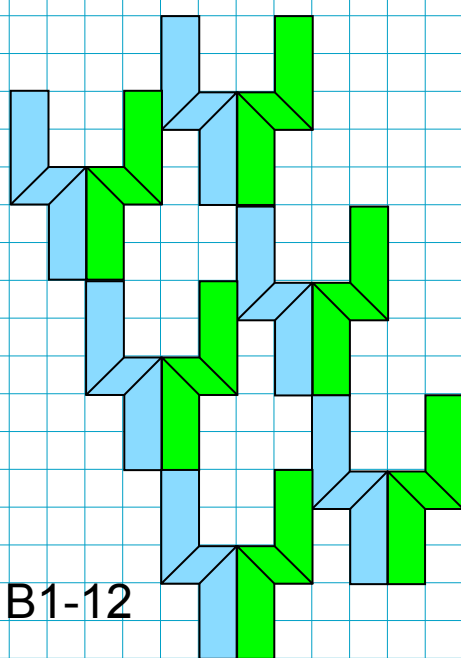
B1-9



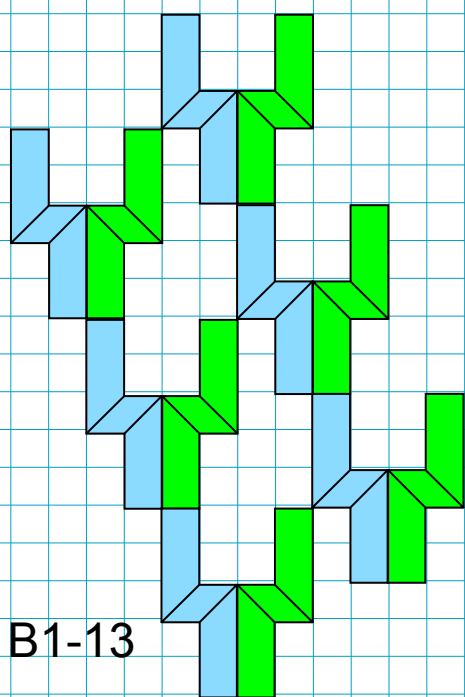
B1-10



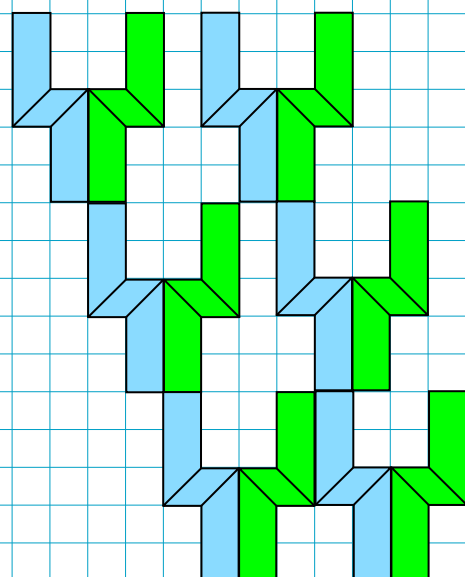
B1-11



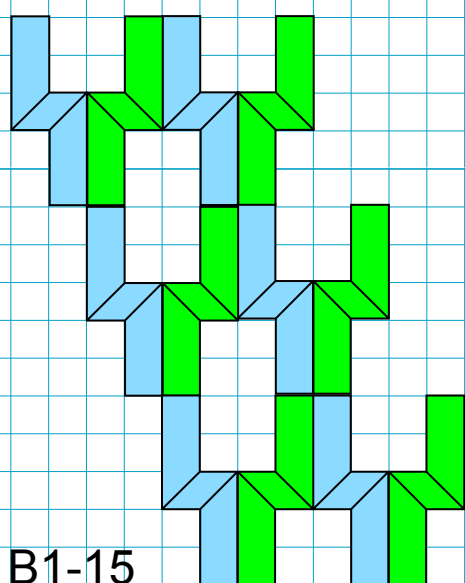
B1-12



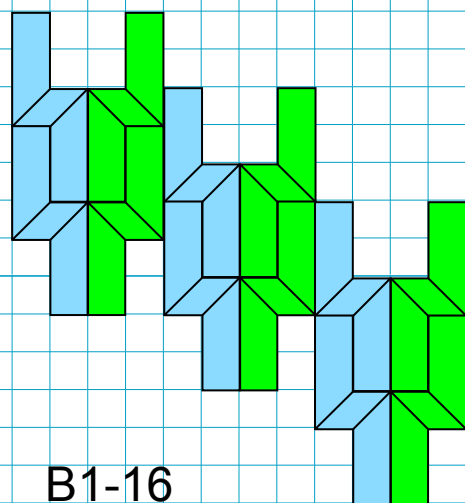
B1-13



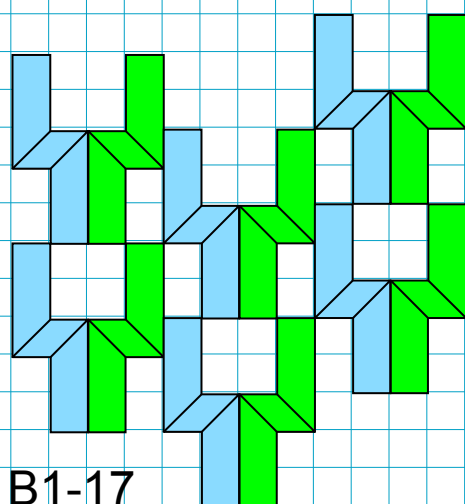
B1-14



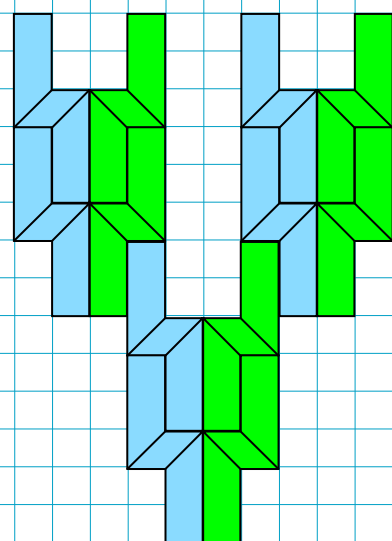
B1-15



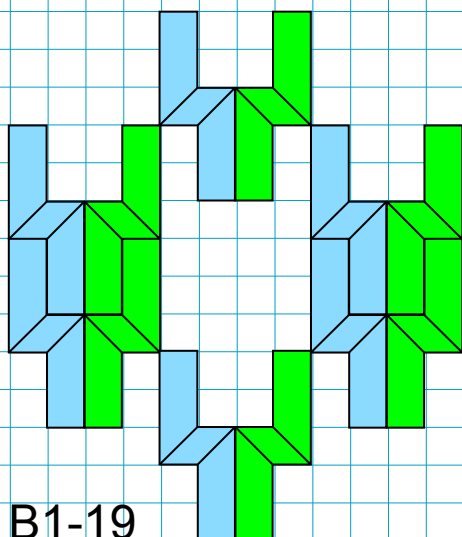
B1-16



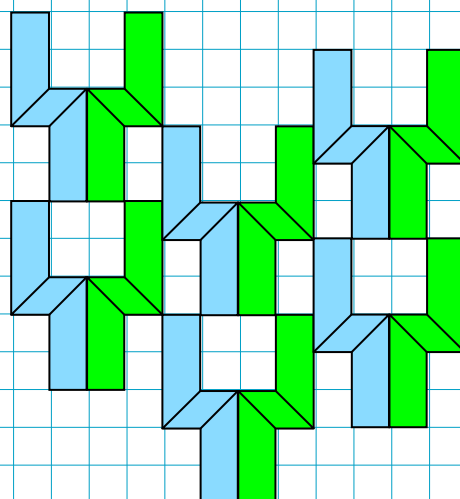
B1-17



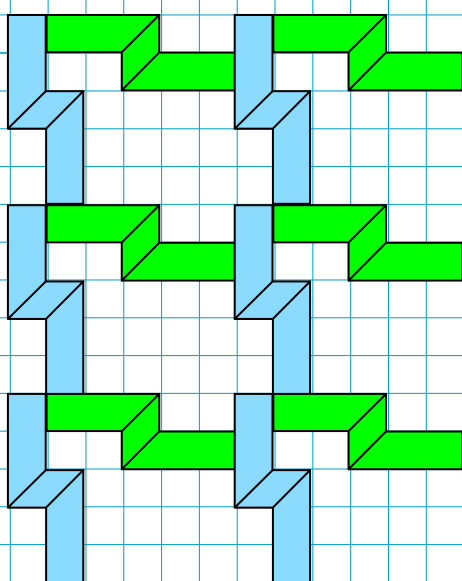
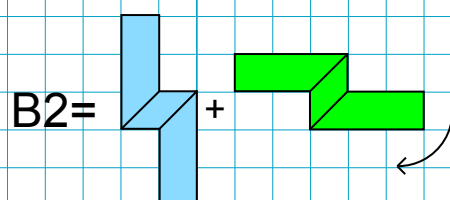
B1-18



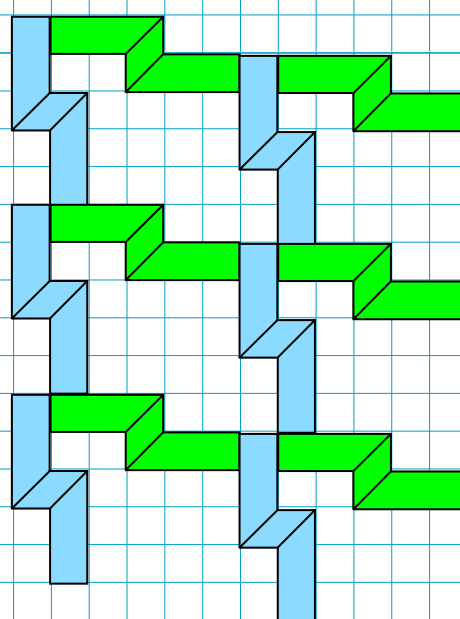
B1-19



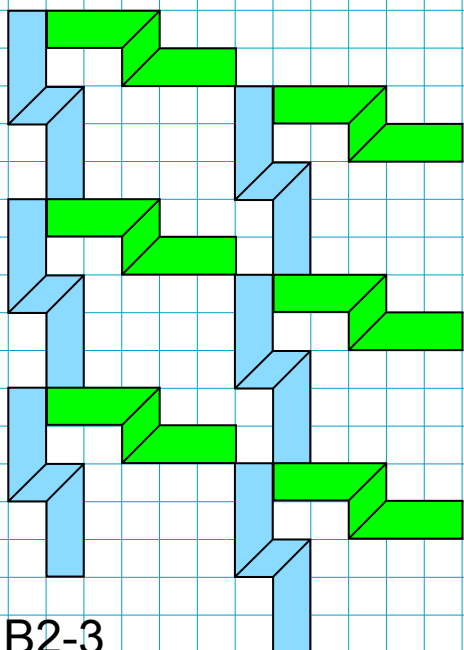
B1-20



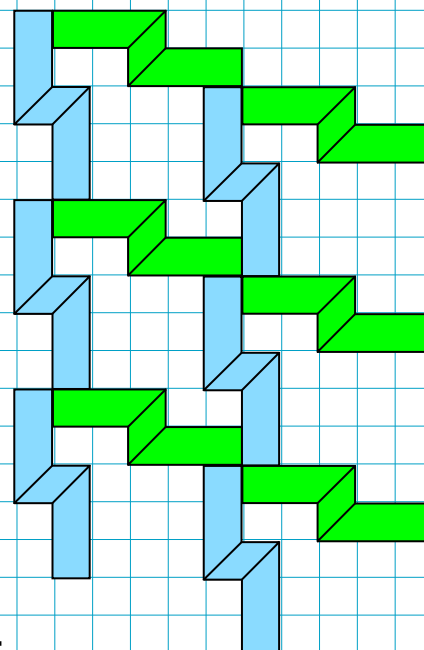
B2-1



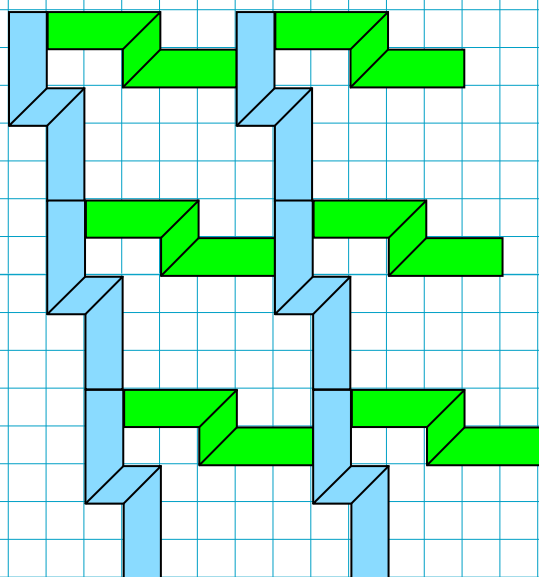
B2-2



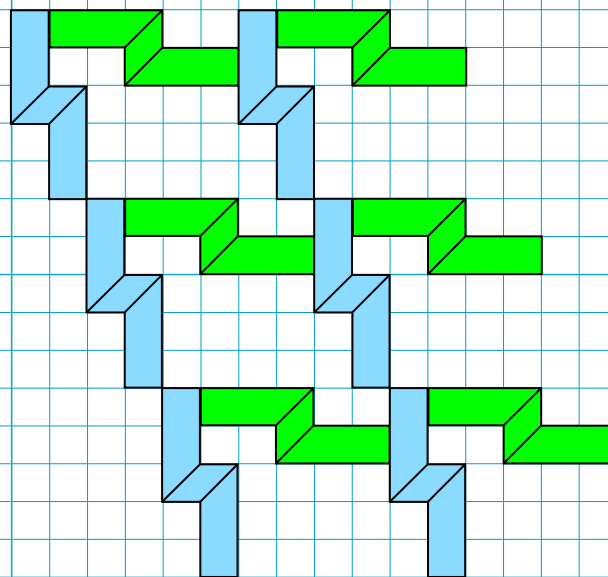
B2-3



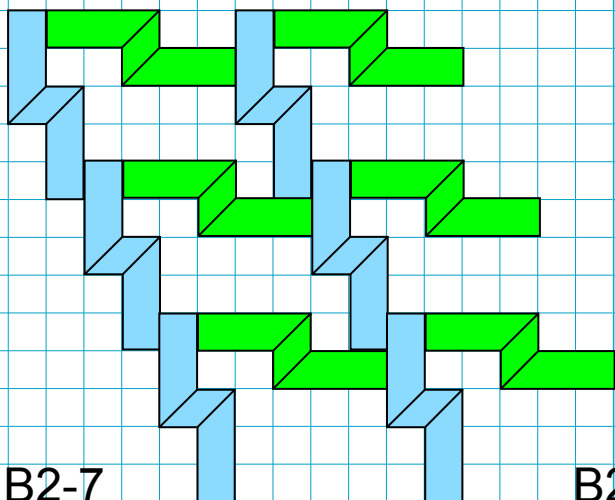
B2-4



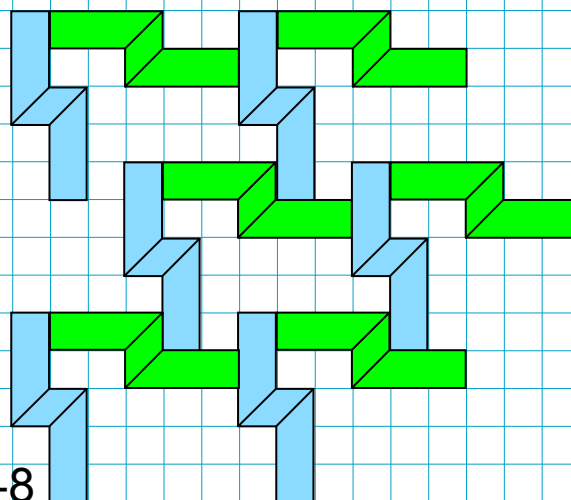
B2-5



B2-6

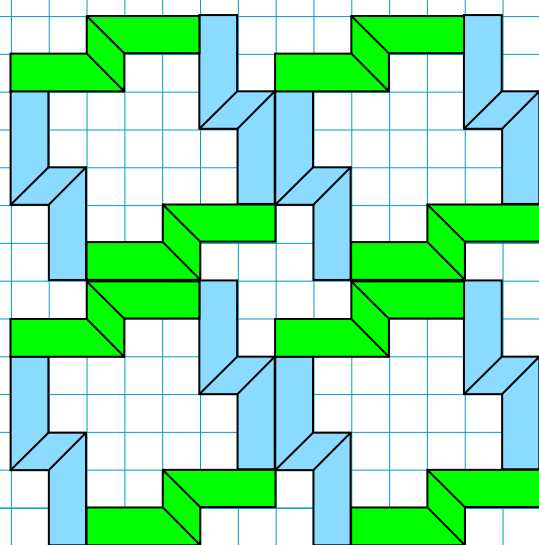
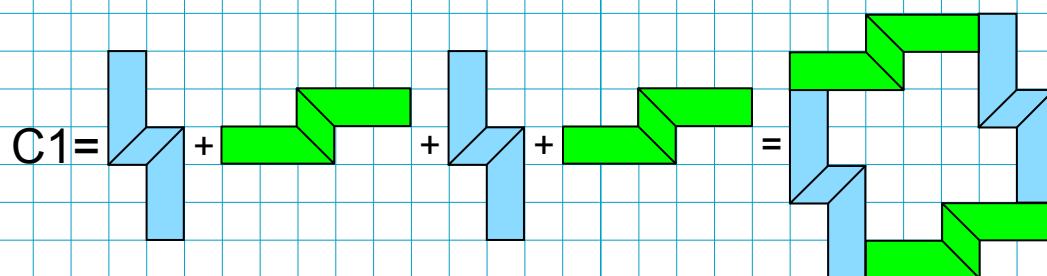


B2-7

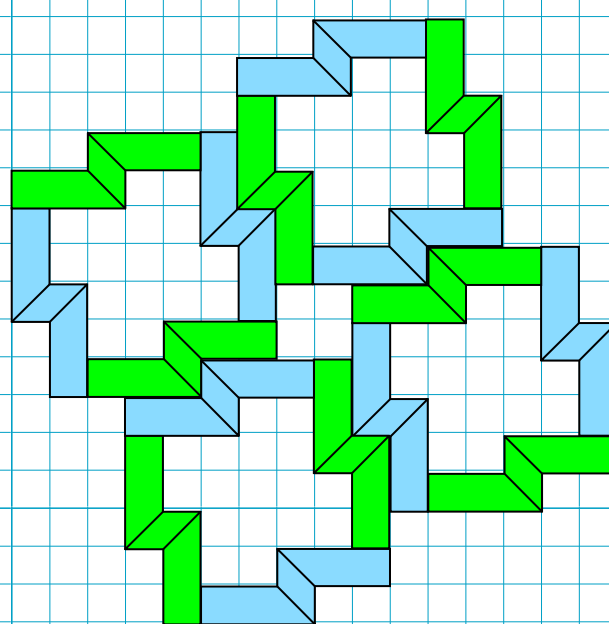


B2-8

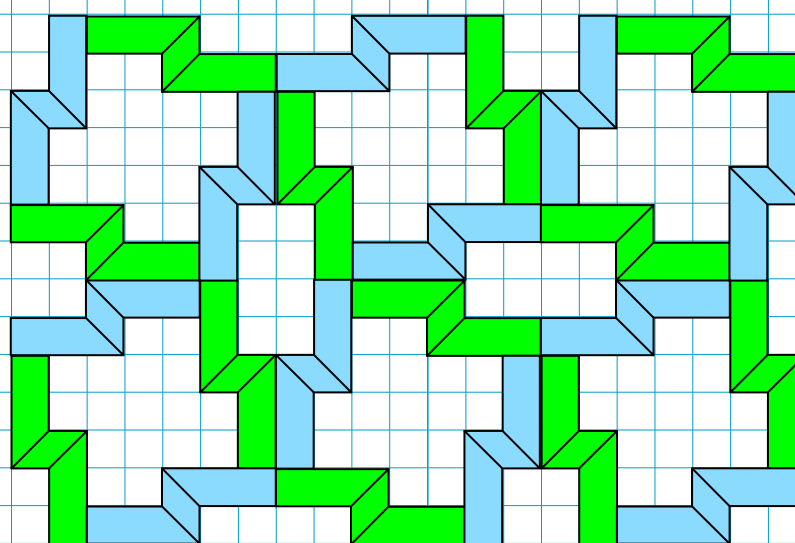
C=MODULO COMPOSTO DA 4 MODULI BASE



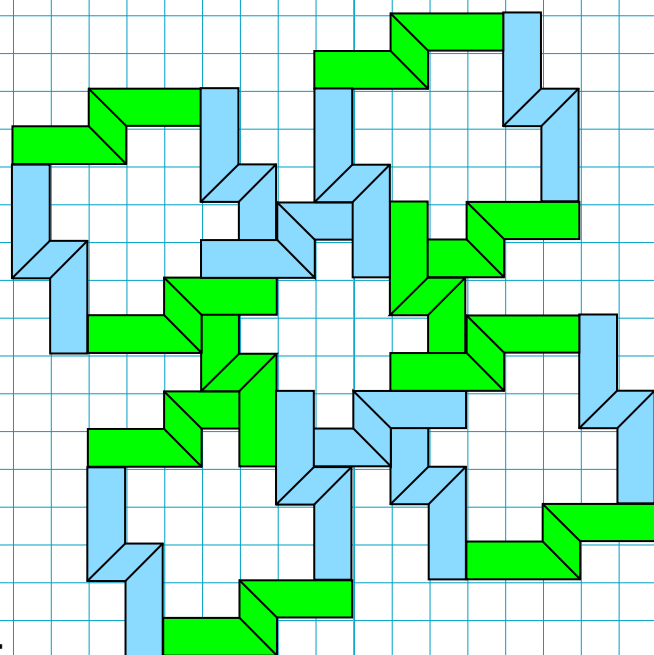
C1-1



C1-2

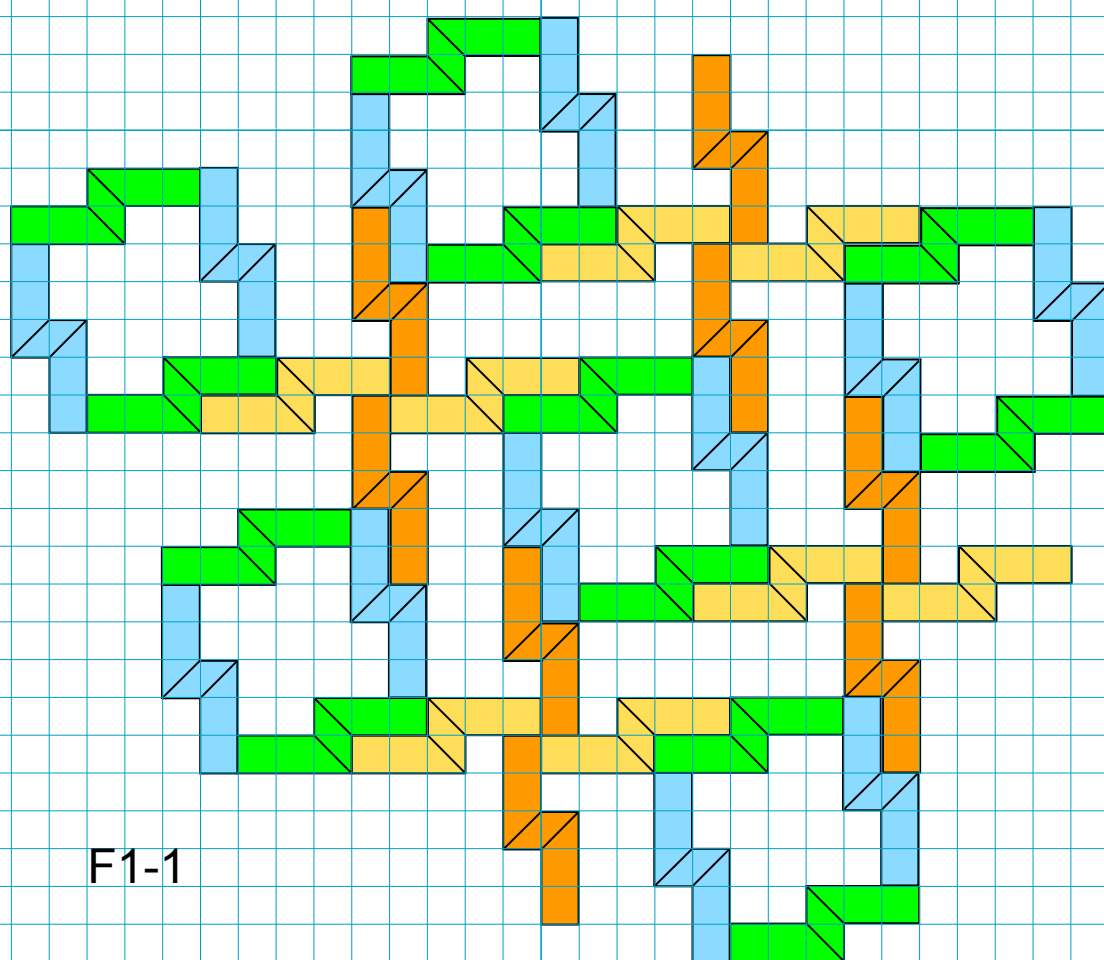


C1-3

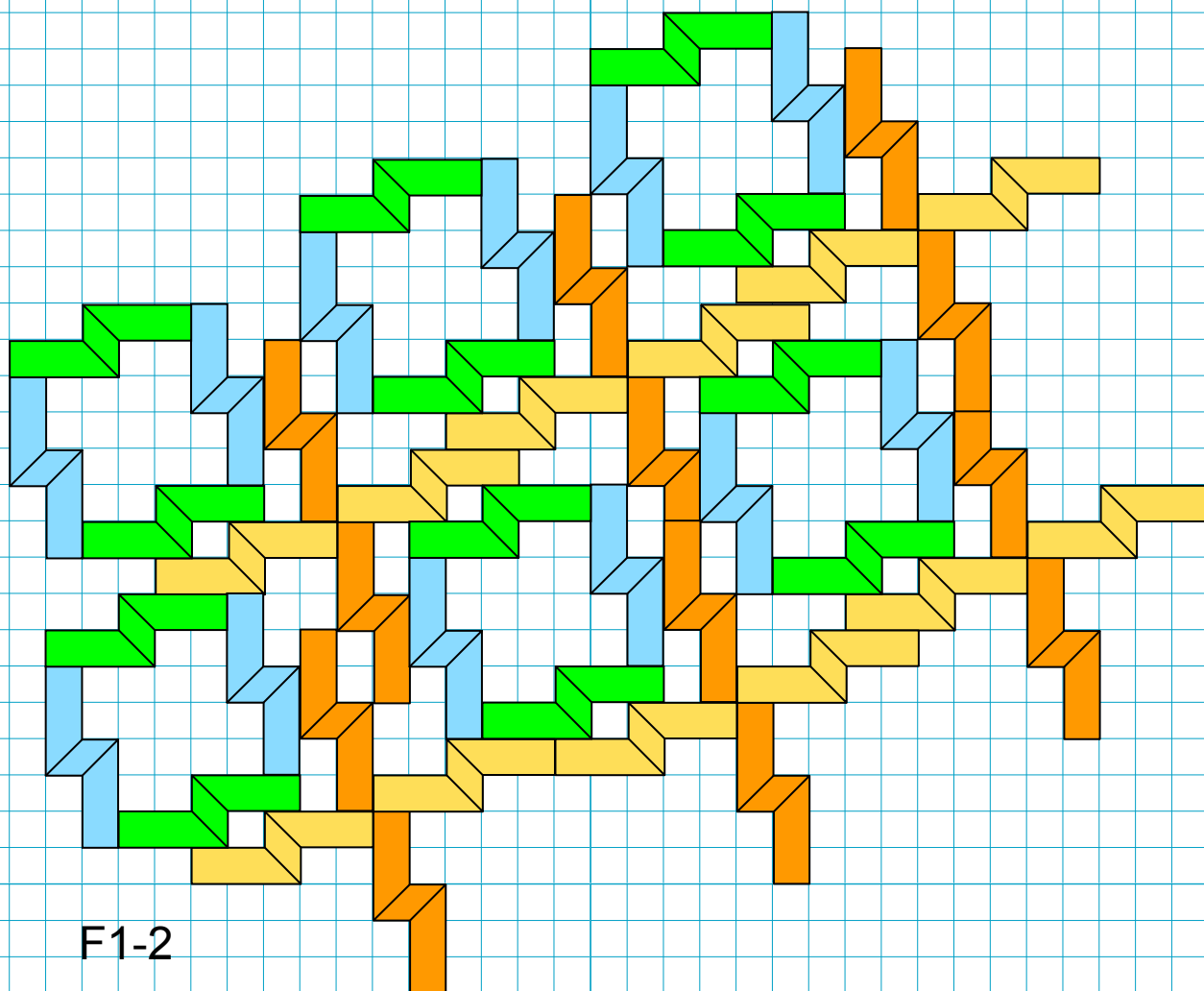


C1-4

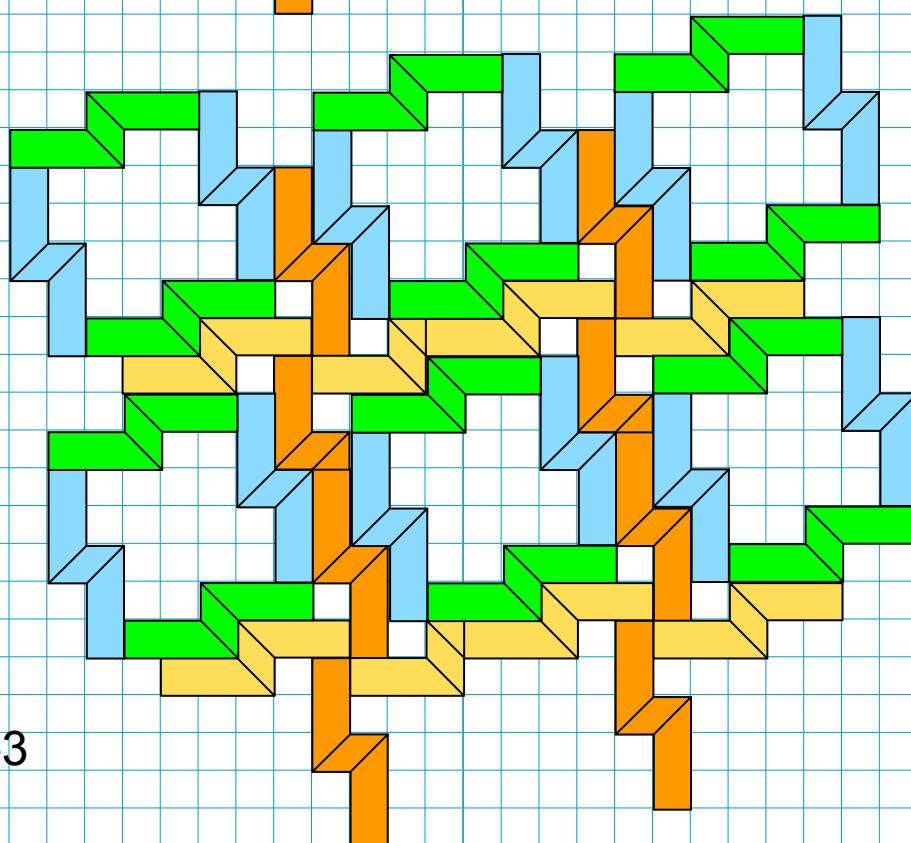
MODULI COMPOSTI CORNICE E CROCE AGGREGATI



F1-1



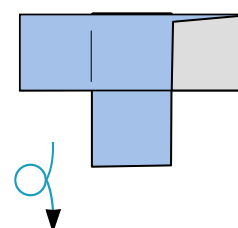
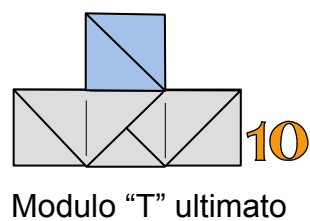
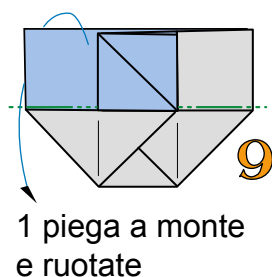
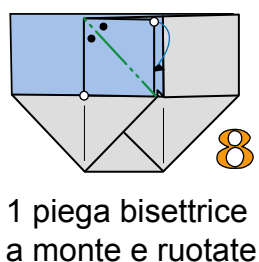
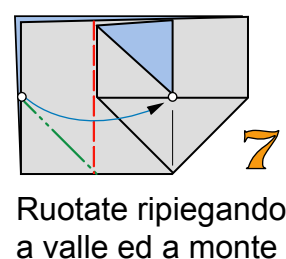
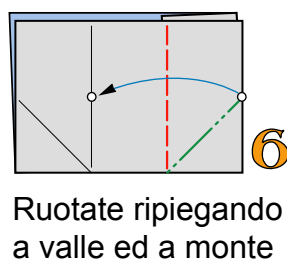
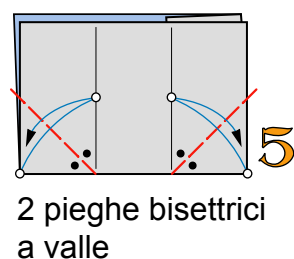
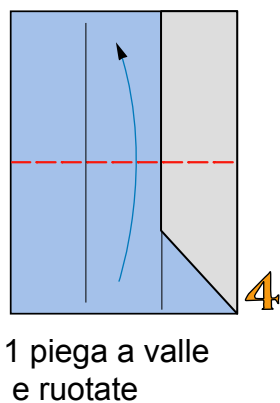
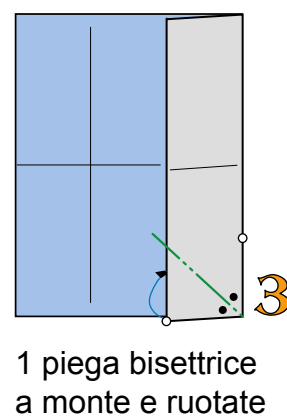
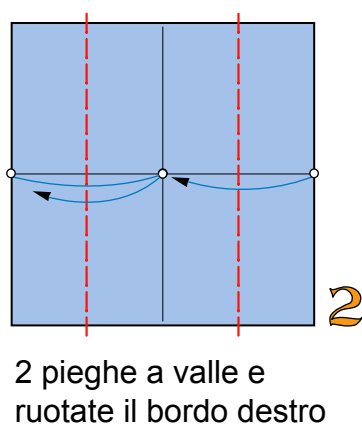
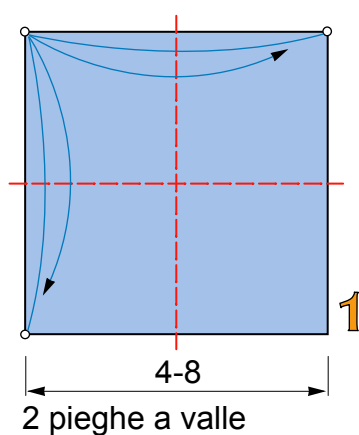
F1-2



F1-3

MODULO "T"

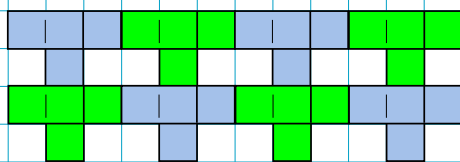
Per questo modulo ho eseguito aggregazioni di tipo A1, A2, A3, A4.
Per chi ne avesse voglia, è possibile proseguire con tutte le altre tipologie d'intervento, tranne ovviamente B,
Adoperate fogli quadrati monocolori, di colore differente, di 4-8 cm di lato.



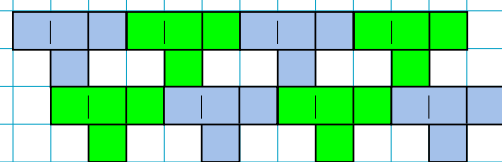
T - COMPOSIZIONI MODULARI

A = 2 MODULI BASE

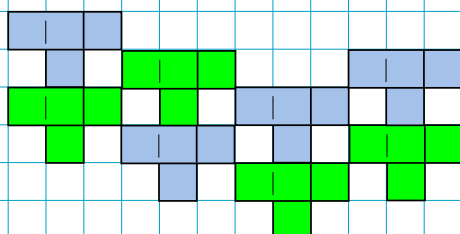
$$A1 = \begin{array}{|c|c|c|} \hline & & \\ \hline & & \\ \hline & & \\ \hline \end{array} + \begin{array}{|c|c|c|} \hline & & \\ \hline & & \\ \hline & & \\ \hline \end{array}$$



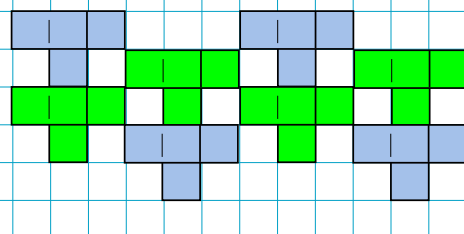
A1-1



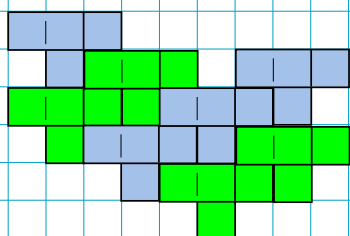
A1-2



A1-3

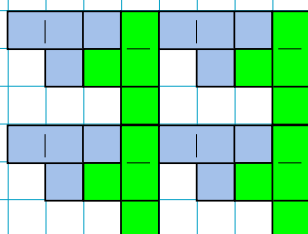


A1-4

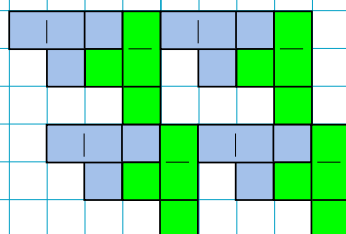


A1-5

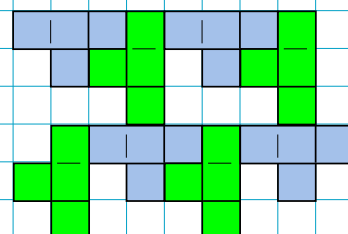
$$A2 = \begin{array}{|c|c|c|} \hline & & \\ \hline & & \\ \hline & & \\ \hline \end{array} + \begin{array}{|c|c|c|} \hline & & \\ \hline & & \\ \hline & & \\ \hline \end{array}$$



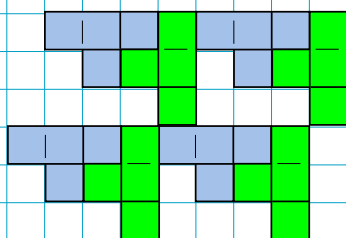
A2-1



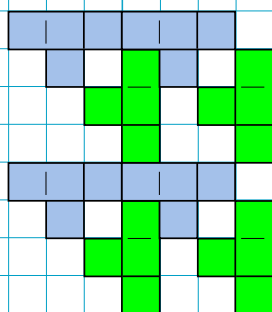
A2-2



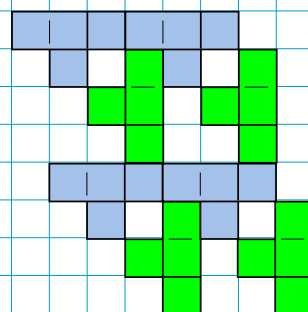
A2-3



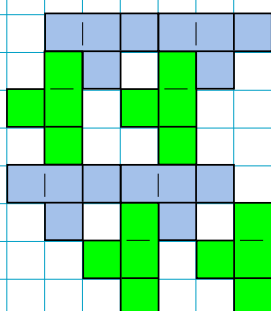
A2-4



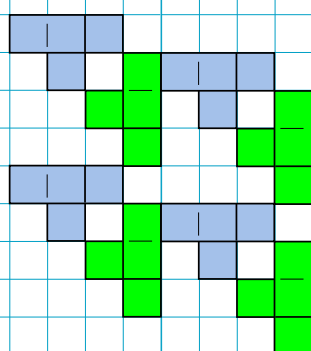
A2-5



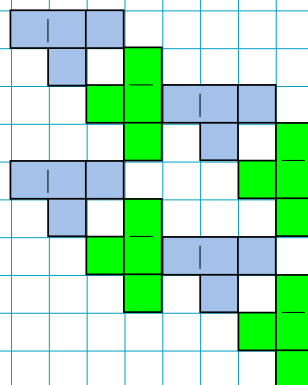
A2-6



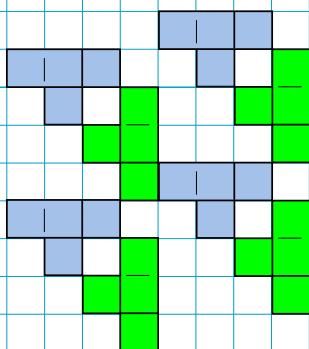
A2-7



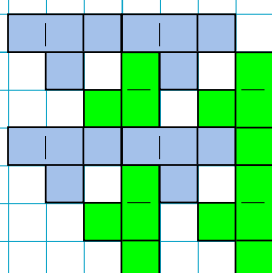
A2-8



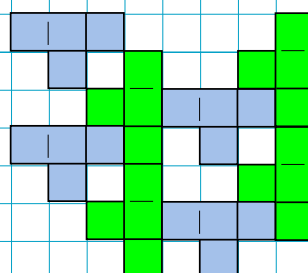
A2-9



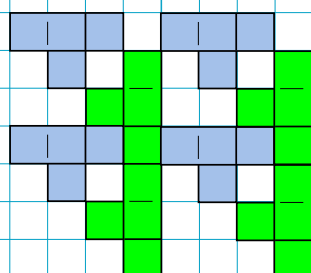
A2-10



A2-11

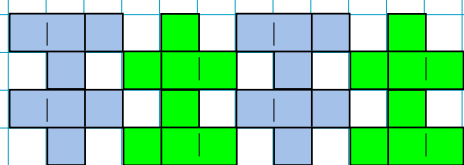


A2-11

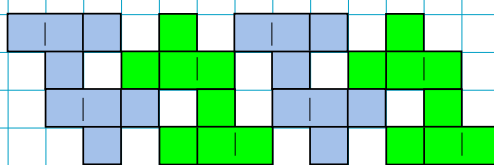


A2-12

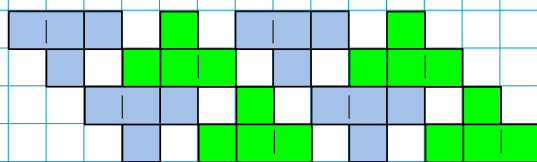
$$A3 = \begin{array}{|c|c|c|} \hline & & \\ \hline & & \\ \hline & & \\ \hline \end{array} + \begin{array}{|c|c|c|} \hline & & \\ \hline & & \\ \hline & & \\ \hline \end{array}$$



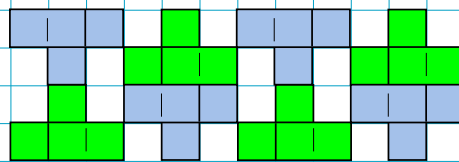
A3-1



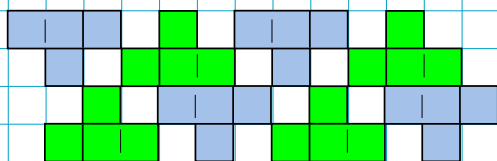
A3-2



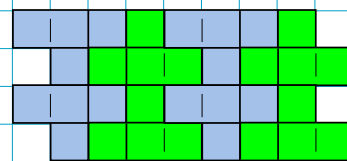
A3-3



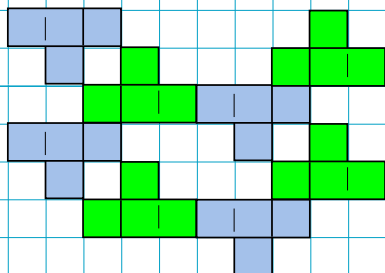
A3-4



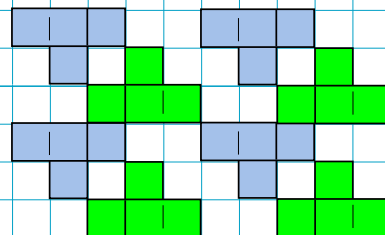
A3-5



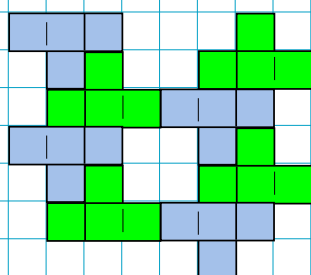
A3-6



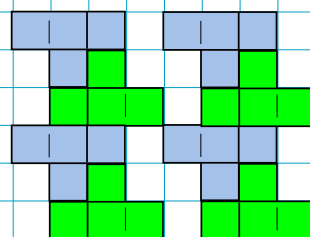
A3-7



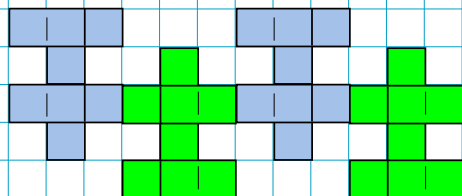
A3-8



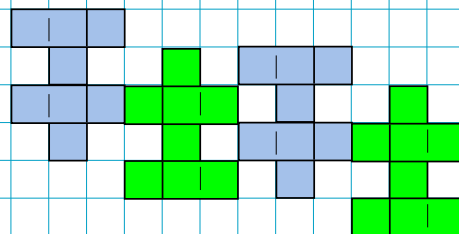
A3-9



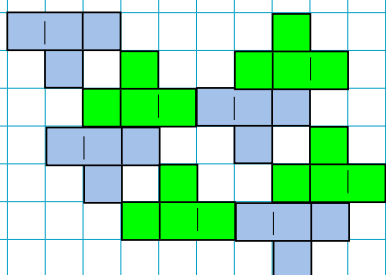
A3-10



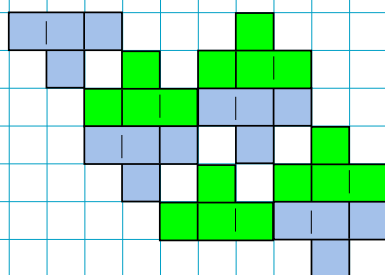
A3-11



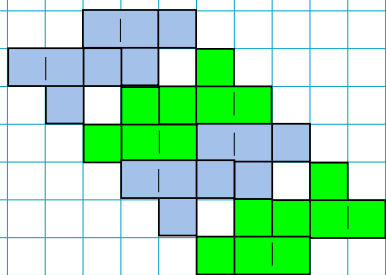
A3-12



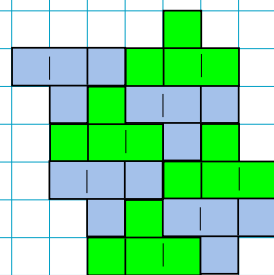
A3-13



A3-14

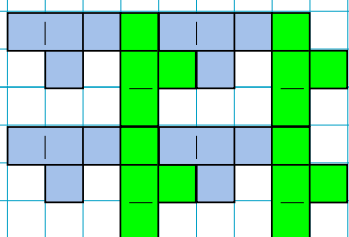


A3-15

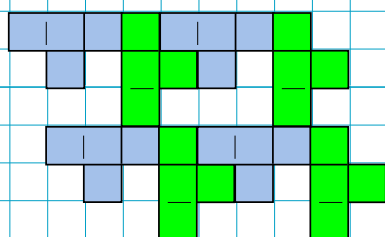


A3-15

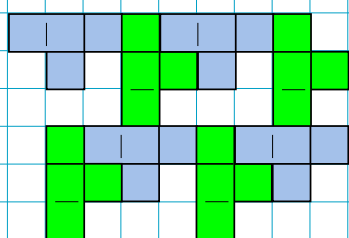
$$A4 = \begin{array}{|c|c|c|} \hline & & \\ \hline & & \\ \hline & & \\ \hline \end{array} + \begin{array}{|c|c|} \hline & \\ \hline & \\ \hline & \\ \hline \end{array}$$



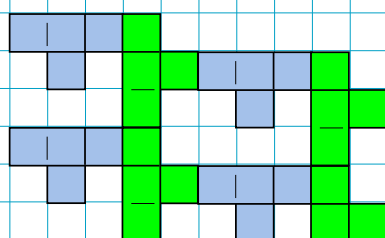
A4-1



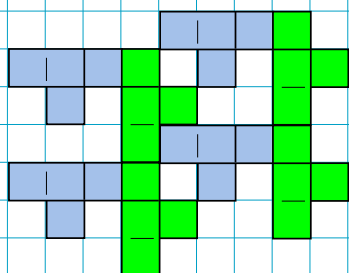
A4-2



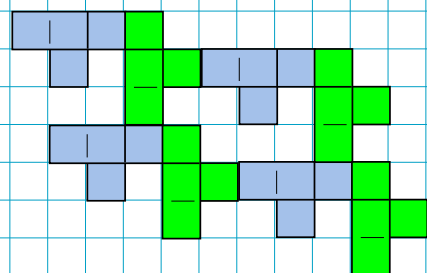
A4-3



A4-4



A4-5



A4-6

C=MODULO COMPOSTO DA 4 MODULI BASE

C1 = 

C2=

C3=

C4=

C5=

D= 2 MODULI BASE COMPENETRATI

D1=  + 

D2= 

D3=  + 

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13	“	JET
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26	“	OCHETTA
38	”	FOCHINA
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62	”	CUBO
83	“	GRADI
110	”	C
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152	”	S
159	“	NASTRO
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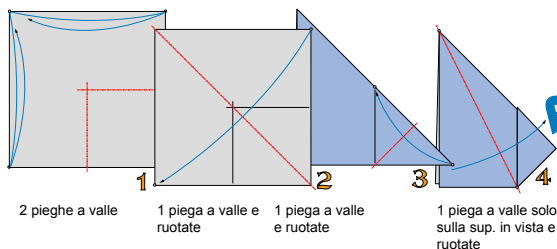
PUBBLICAZIONI DI FRANCO PAVARIN

Aerei , jet ed astronavi di carta volanti	IL CASTELLO	1986
Origami animati	“	1987
Origami maschere animate	”	1988
Decorazioni modulari con origami modulati	“	1989
Origami motoscafi navi barche e velieri	”	1990
Origami scatole e contenitori	“	1990
Pieghe forme e colori	”	1994
Aerei e navi di carta	FABBRI	1996
Fold and fly Paper airplanes	STERLING PUBLISHING	1998
Manuale rapido di aerei di carta volanti	FABBRI	2000
Aerei di carta 17 modelli volanti inediti	IL CASTELLO	2001
Aviones voladores	TUTOR S.A.	2003
17 modelos ineditos de aviones voladores	“	2004
Naves voladoras	”	2006
Quaderni Quadrato magico n.20 e 48	CDO	
Maschere, elmi e copricapi	web	2010
Maschere trasformabili	web	2011
21 nuovi aerei origami volanti	web	2014
Maschere origami 3D volume 1	web	2014
Maschere origami 3D volume 2	web	2015
Legorigami 1 -Q.Quadrato Magico n.56	CDO	2015
Composizione modulare 1	web	2016
Manuale dell'architetto origamista	web	2016

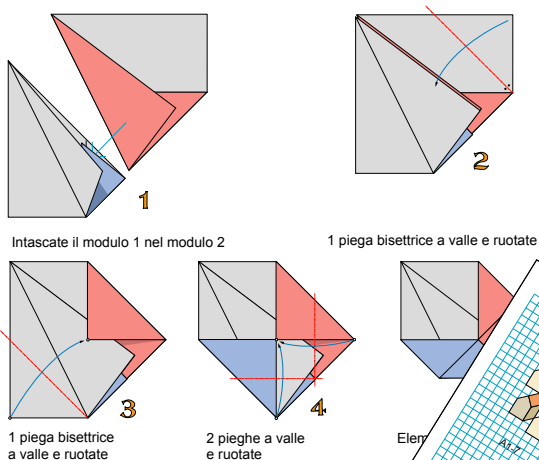
13 MODULI ORIGAMI AGGREGABILI

PER ESERCITAZIONI
SCOLASTICHE

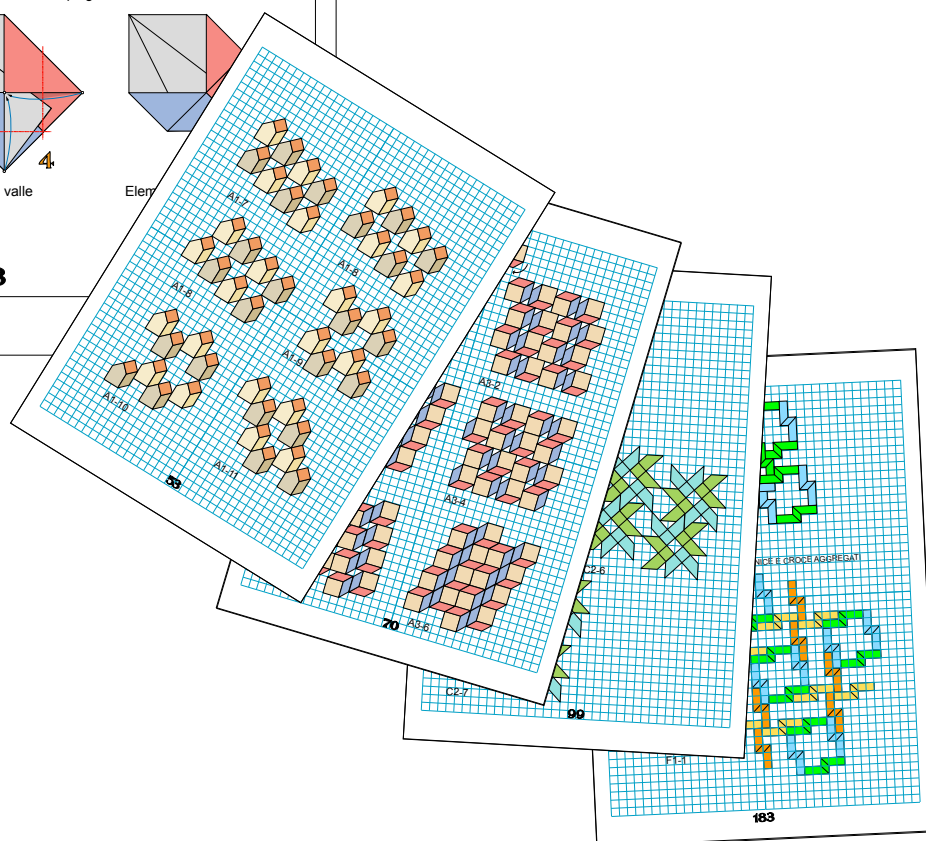
ELEMENTO 2



UNIONE DEI 2 ELEMENTI



63



Laboratori di composizione modulare per ragazzi da 8 a 14 anni

Franco Pavarin

www.aereimaschereorigami.altervista.org