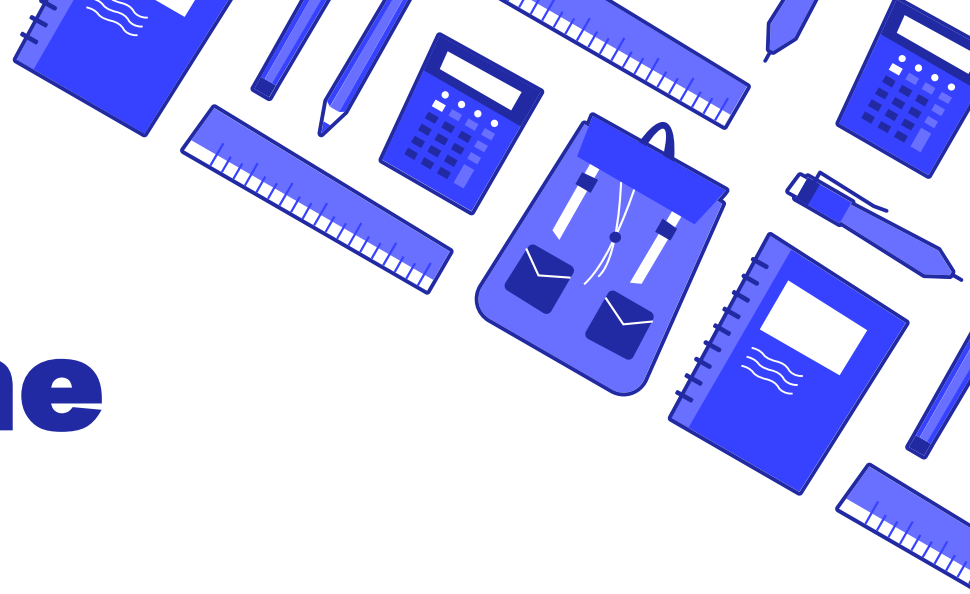


Yeni Nesil

Akıl Yürütme & Matematiksel Modelleme

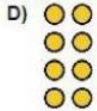
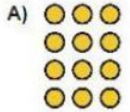
Uzun Öğretmen



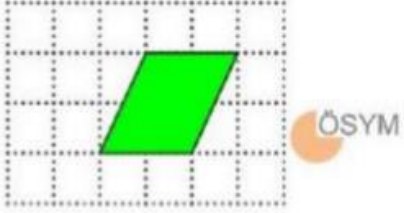
Özge Öğretmen bir çokluğun $\frac{5}{3}$ kadarını temsil eden
aşağıdaki modeli öğrencilerine göstererek 1'e karşılık
gelen modeli oluşturmalarını istemiştir.



Buna göre, aşağıdakilerden hangisi 1'e karşılık
gelen modeldir?

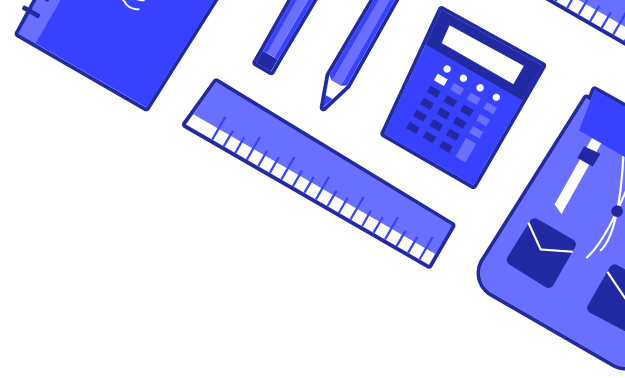
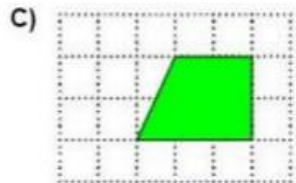
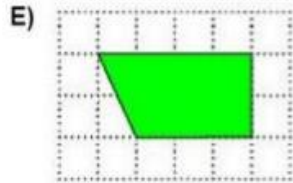
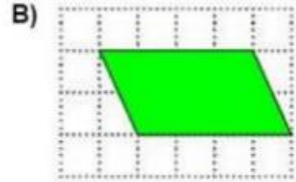
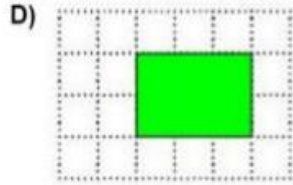
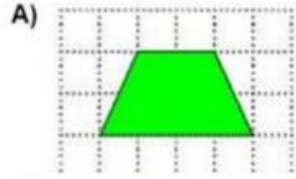


Aşağıdaki şekil, bir bütünün yarısını temsil etmektedir.



Buna göre aşağıdakilerden hangisi bu bütünün

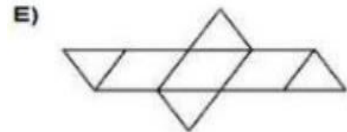
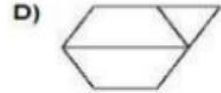
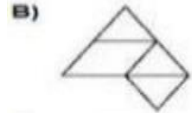
$\frac{5}{8}$ 'ini temsil etmektedir?

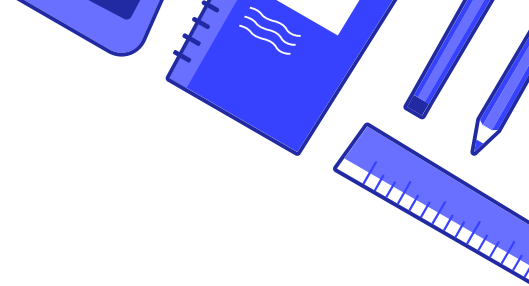




Bir sınıf öğretmeni, $\frac{1}{6} + \frac{3}{6}$ işlemini örüntü bloklarını kullanarak yukarıdaki gibi modellemiş, daha sonra öğrencilerinden bu modeldeki blokların kesir karşılıklarını dikkate alarak $\frac{1}{3} + \frac{4}{3}$ işlemini örüntü blokları ile modellemelerini istemiştir.

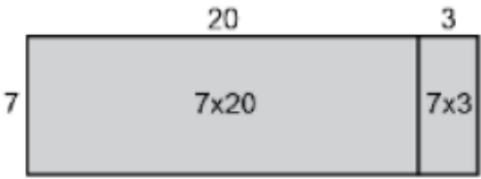
Öğrencilerin oluşturduğu aşağıdaki modellerden hangisi verilen işlem için uygundur?



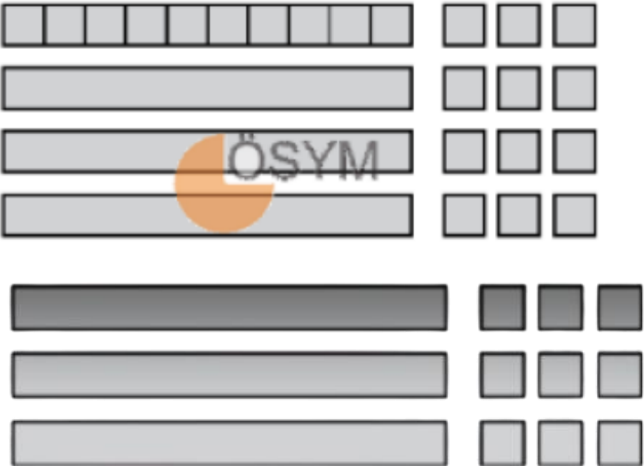


Mert Öğretmen'in sınıfındaki 3 öğrenci 7×23 işlemini aşağıdaki gibi farklı modellerde göstermiştir.

I



II



III

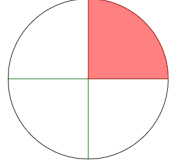


Buna göre, verilen modellerden hangisi 7×23 işlemine uygun bir model değildir?

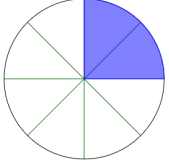
- A) Yalnız I
- B) Yalnız II
- C) Yalnız III
- D) I ve II
- E) II ve III

Cevap Anahtarı: B

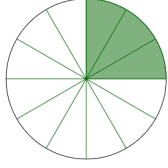
DENK KESİRLER



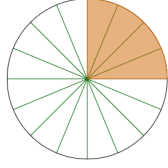
$$\frac{1}{4}$$



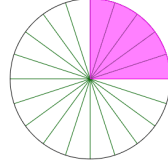
$$\frac{2}{8}$$



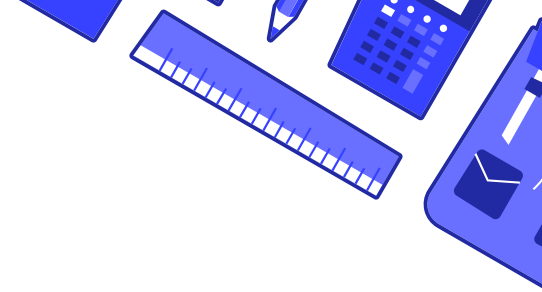
$$\frac{3}{12}$$



$$\frac{4}{16}$$

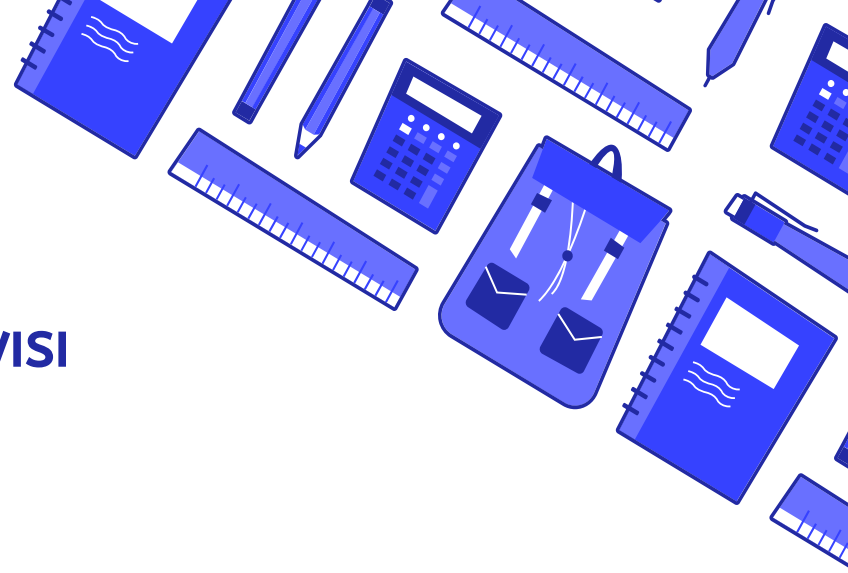


$$\frac{5}{20}$$



Denk Kesirler: Kesir ve Kesir Sayısı

- 1.
- 2.
- 3.



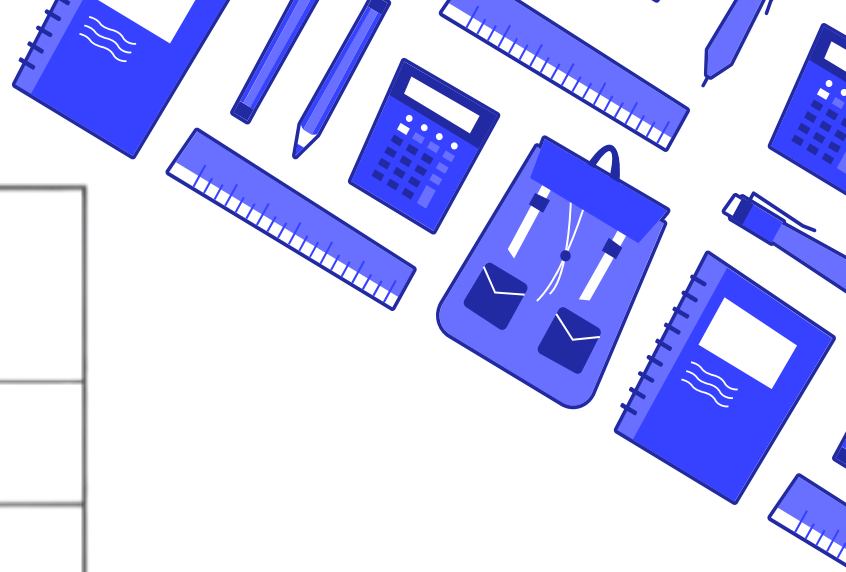
Denk Kesirler: Kesir ve Kesir Sayısı

45. e aittir. veya kuruluş

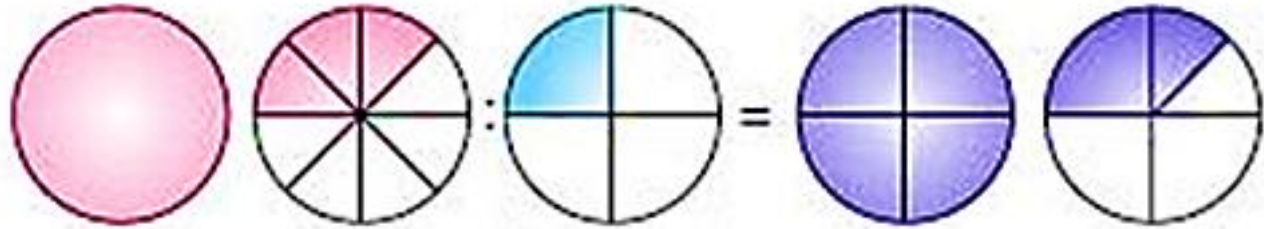
I.		$\frac{1}{2} \equiv \frac{2}{4}$	
II.		$\frac{1}{2} \equiv \frac{2}{4}$	
III.		$\frac{1}{2} \equiv \frac{2}{4}$	

Kesirlerin denkliđi konusunu işleyen bir matematik öğretmeninin yukarıdaki modellerden hangilerini kullanması uygun değildir?

- A) Yalnız I B) Yalnız II C) I ve II
D) I ve III E) I, II ve III



Bölme Modellemesi

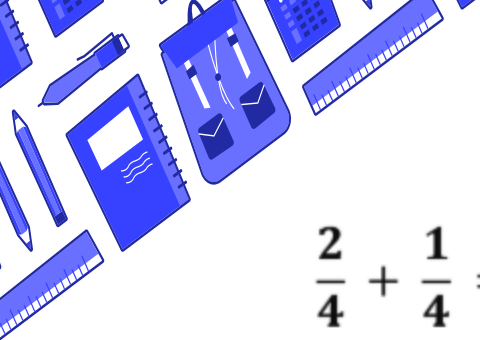


Bölme Modellemesi – Sıra Sizde



Buna göre, $2 : \frac{1}{4}$ işleminin modeli sorulmaktadır.





$$2\frac{2}{4} + 1\frac{1}{4} =$$

$$5\frac{5}{6} - 4\frac{4}{6} =$$

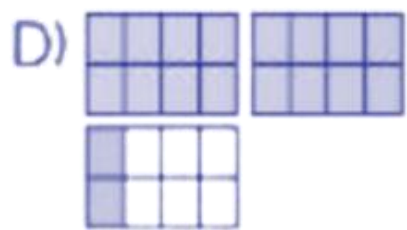
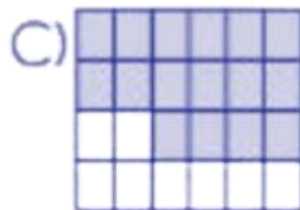
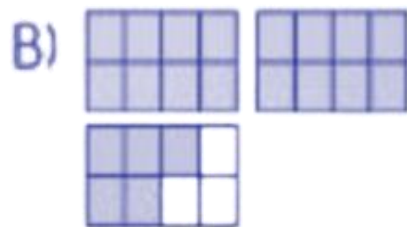
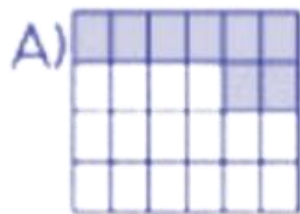
$$4\frac{4}{5} + 3\frac{3}{5} =$$

$$11\frac{11}{8} - 7\frac{7}{8} =$$

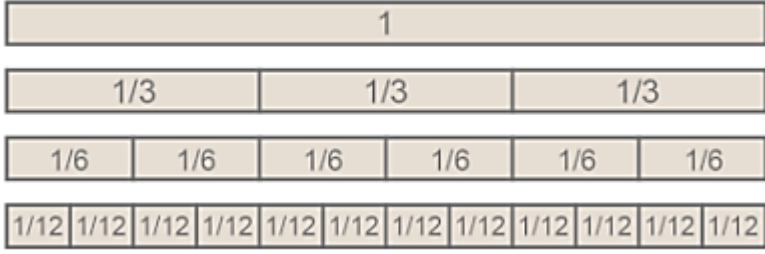
$$1\frac{3}{6} + 1\frac{2}{6} =$$

$$2\frac{5}{8} - 1\frac{3}{8} =$$

$$\frac{21}{8} - \frac{3}{8} =$$



46.



Bir öğrencinin şekildeki kesir çubuklarını kullanarak aşağıdaki işlemlerin hangisini yapması beklenemez?

A) $\frac{5}{6} - \frac{1}{12}$ işleminin sonucunu bulması

B) $\frac{2}{3} + \frac{1}{6}$ işleminin sonucunu bulması

C) $\frac{1}{3} \div 2$ işleminin sonucunu bulması

D) Toplamları $\frac{2}{3}$ olan kesirler bulması

E) Toplamları $\frac{4}{9}$ olan kesirler bulması

56. Erhan Öğretmen, 24×16 işlemini önce basamak tablosunda göstermiştir. Sonra öğrencilerin daha iyi anlamaları için alan modelini kullanmış ve basamak tablosundaki Romen rakamlarına karşılık gelen değerleri, alan modelindeki harflere karşılık gelen alanlarla göstermiştir.

Y	O	B	
	2	4	
x	1	6	
	2	4	I
1	2	0	II
	4	0	III
+	2	0	IV
	3	8	4

C	F
B	D
A	E

Buna göre, aşağıdakilerden hangisi basamak tablosu ile alan modeli arasındaki ilişkiyi en iyi biçimde açıklar?

- | | I | II | III | IV |
|----|---|-------|-------|-------|
| A) | C | A + B | F | D + E |
| B) | F | C | D + E | A + B |
| C) | F | D + E | C | A + B |
| D) | C | D + E | F | A + B |
| E) | F | A + B | C | D + E |

56. Bir öğretmen, çözümü bölme işlemi yapmayı gerektiren bir soru için aşağıdaki modeli oluşturmuştur:

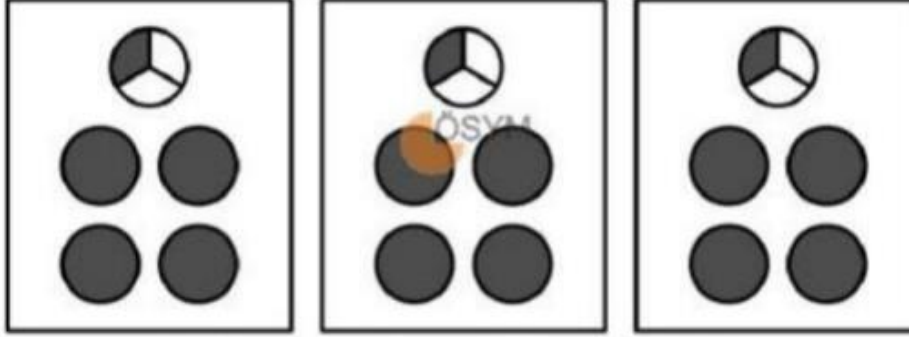


Öğretmenin oluşturduğu bu model aşağıdaki sorulardan hangisinin çözümüne yönelik olabilir?

- A) 3 kardeş, 13 balonu eşit sayıda paylaşırsa her biri kaç balon alır?
- B) Bir manav, 13 karpuzu 5 kasaya her birinde eşit sayıda olacak şekilde paylaşırsa her kasaya kaç karpuz koyar?
- C) Bir öğrenci, 3 rafı bulunan kitaplığına 13 kitabı her bir rafta eşit sayıda kitap olacak şekilde yerleştirirse her rafta kaç kitap olur?
- D) Bir anne, 13 elmayı 5 çocuğuna eşit sayıda paylaşırsa her çocuk kaç tane elma alır?
- E) Bir kırtasiyeci, yeni aldığı kalemleri her biri 3 kalem alan paketlere koyarsa bu kırtasiyecinin 13 kalem için kaç kutuya ihtiyacı olur?



Bir sınıf öğretmeni, öğrencilerine aşağıdaki modeli göstererek bu modelin hangi bölme işlemi temsil ettiğini sormuştur.



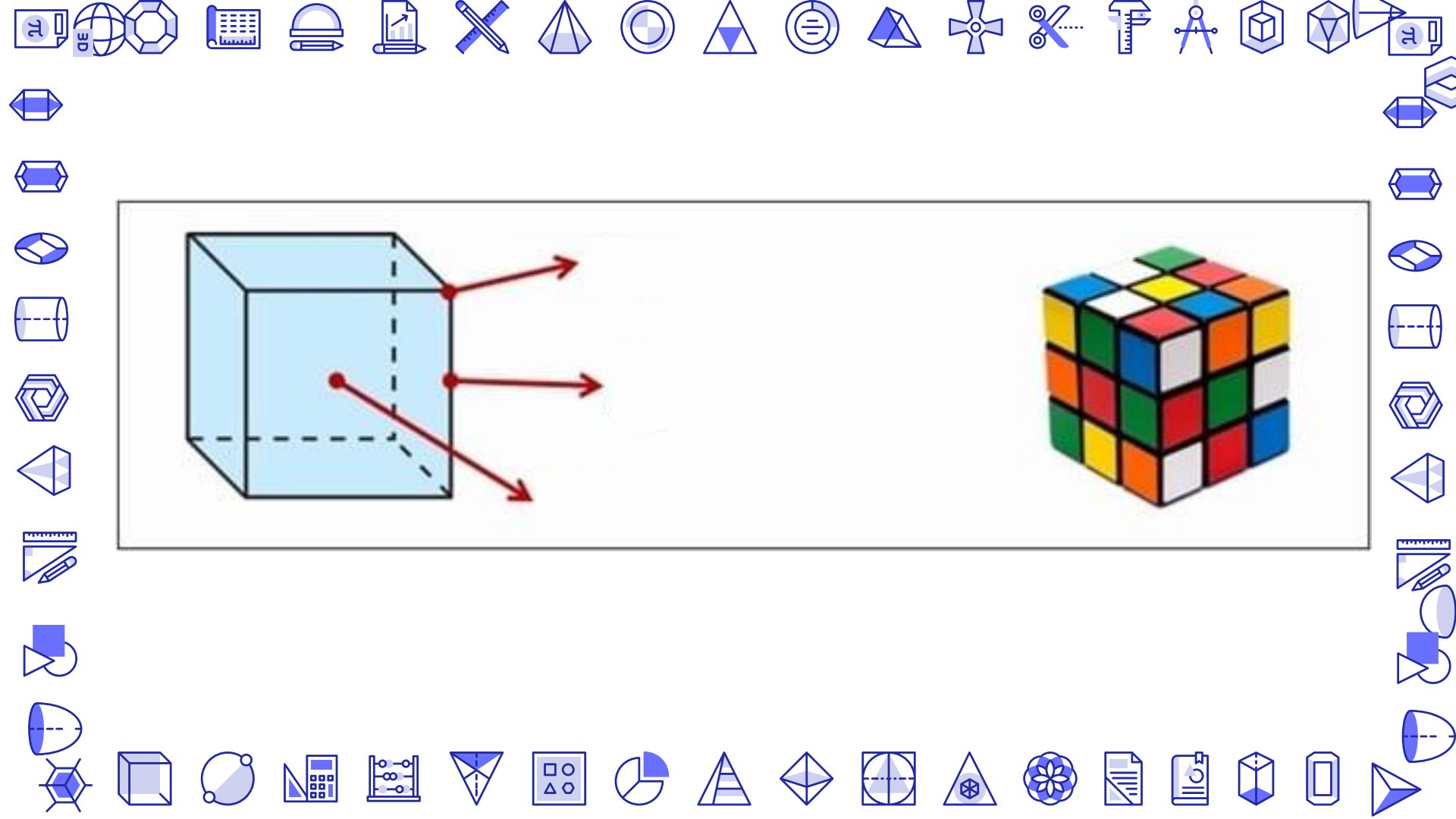
Buna göre öğrencilerin verdiği aşağıdaki cevaplardan hangisi doğrudur?

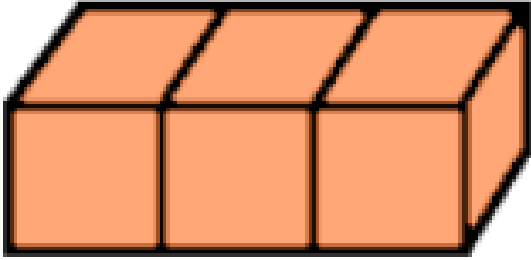
- A) $15 \div 6$
- B) $12 \div 5$
- C) $39 \div 5$
- D) $13 \div 3$
- E) $15 \div 3$

Yeni Nesil

Katı Cisimler







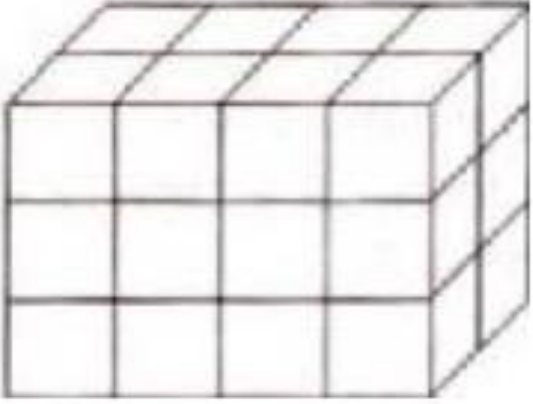
Şekildeki cisim, üç küpün yapıştırılması ile elde edilmiştir. Buna göre , cismin yüzeyinde toplam kaç adet kare vardır?

A) 14

B) 15

C) 16

D) 17



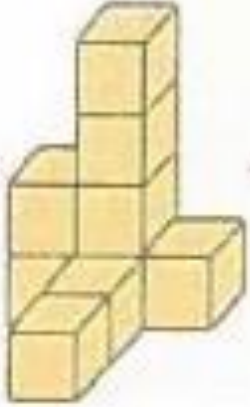
Şekildeki dikdörtgenler prizması, 1 ayrıtı 1 birim olan küplerden meydana gelmiştir. Prizmanın tüm yüzey alanı kaç birim karedir?

A) 52

B) 36

C) 42

D) 32



1. Şekil



2. Şekil

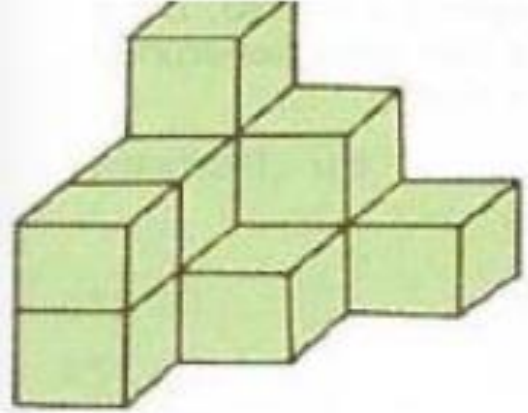
Yukarıdaki şekiller birbirine eş küplerden oluşmuştur. Buna göre 2. şekil elde etmek için 1. şekle kaç küp eklenmelidir?

A) 10

B) 8

C) 7

D) 6



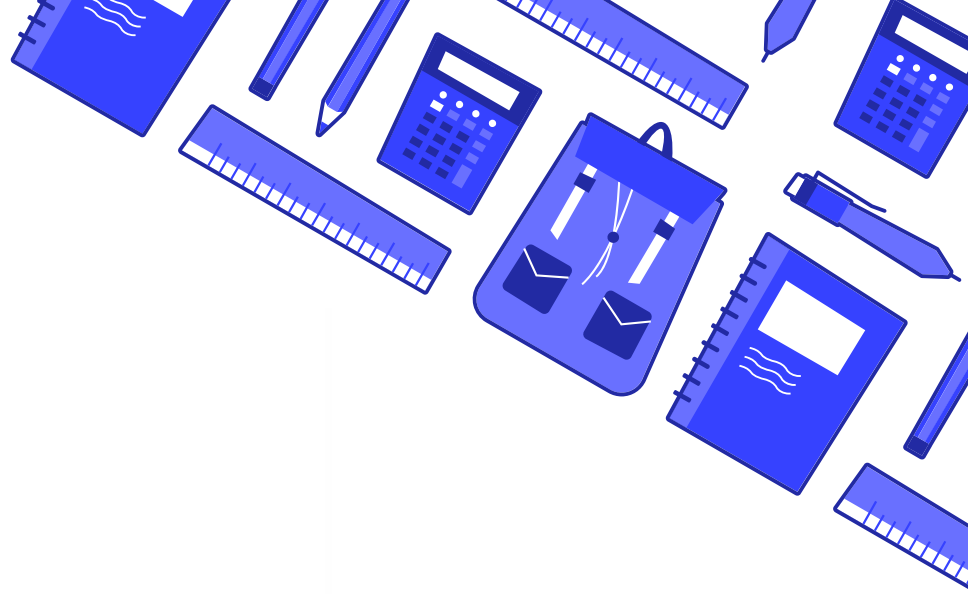
Yukarıdaki verilen eş küplerden oluşan yapıya en az kaç tane eş küp eklersek bir küp oluşturabiliriz?

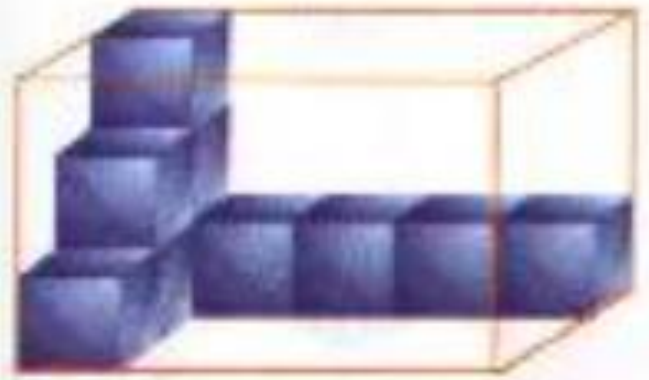
A) 19

B) 16

C) 15

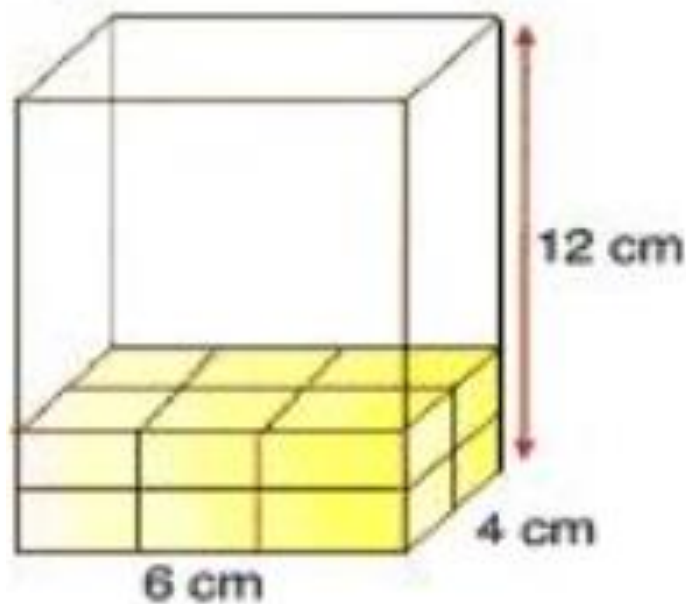
D) 14





Yukarıdaki kutunun tamamını doldurmak için kaç adet daha küp gerekir?

- A) 30 B) 35 C) 40 D) 45



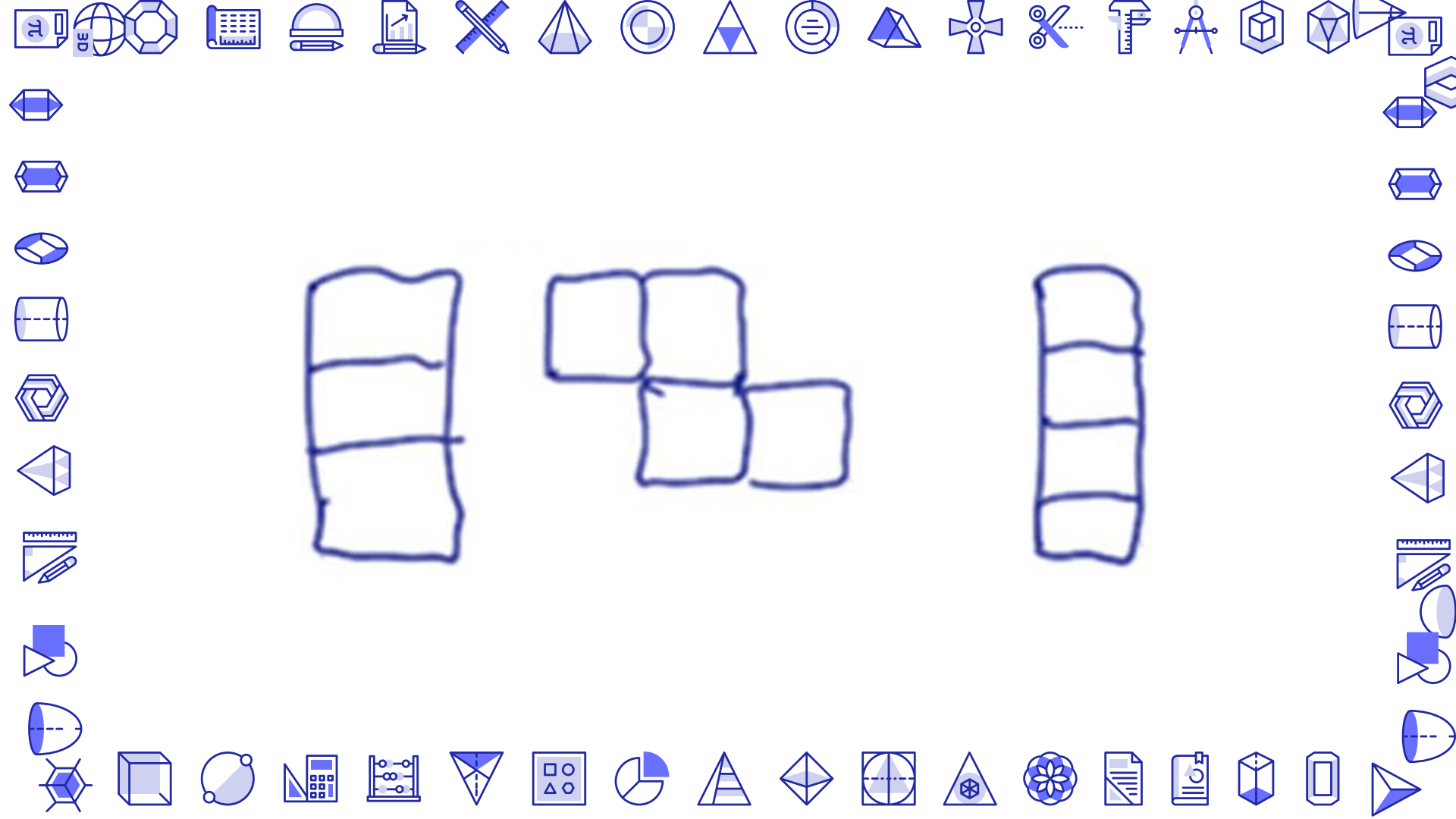
Yukarıda verilen dikdörtgenler prizması şeklindeki kutunun $\frac{1}{3}$ ü eş küplerle doludur. Kutunun tamamını doldurmak için kaç küp daha gerekir?

A) 24

B) 28

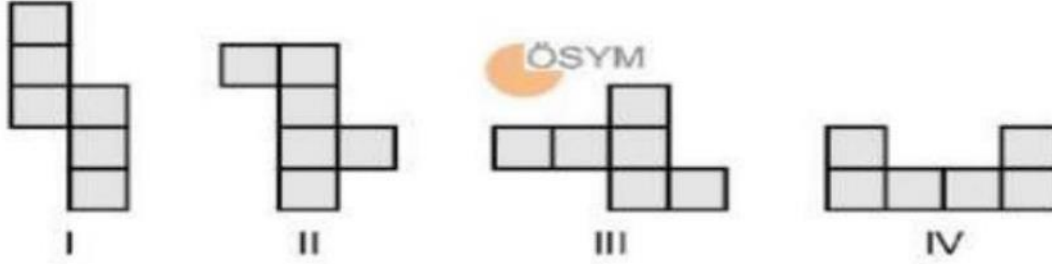
C) 32

D) 36



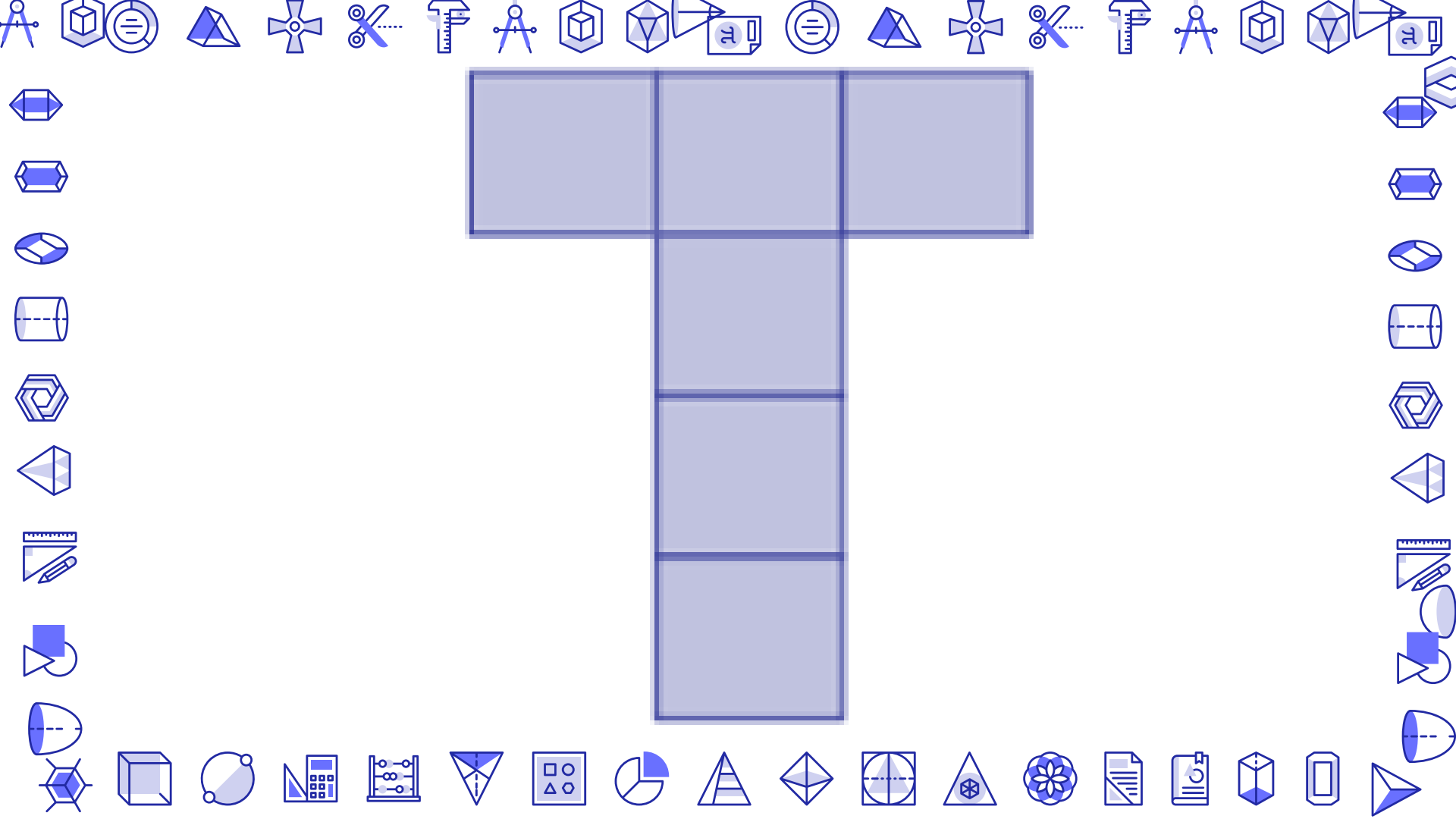
Soru No: 54

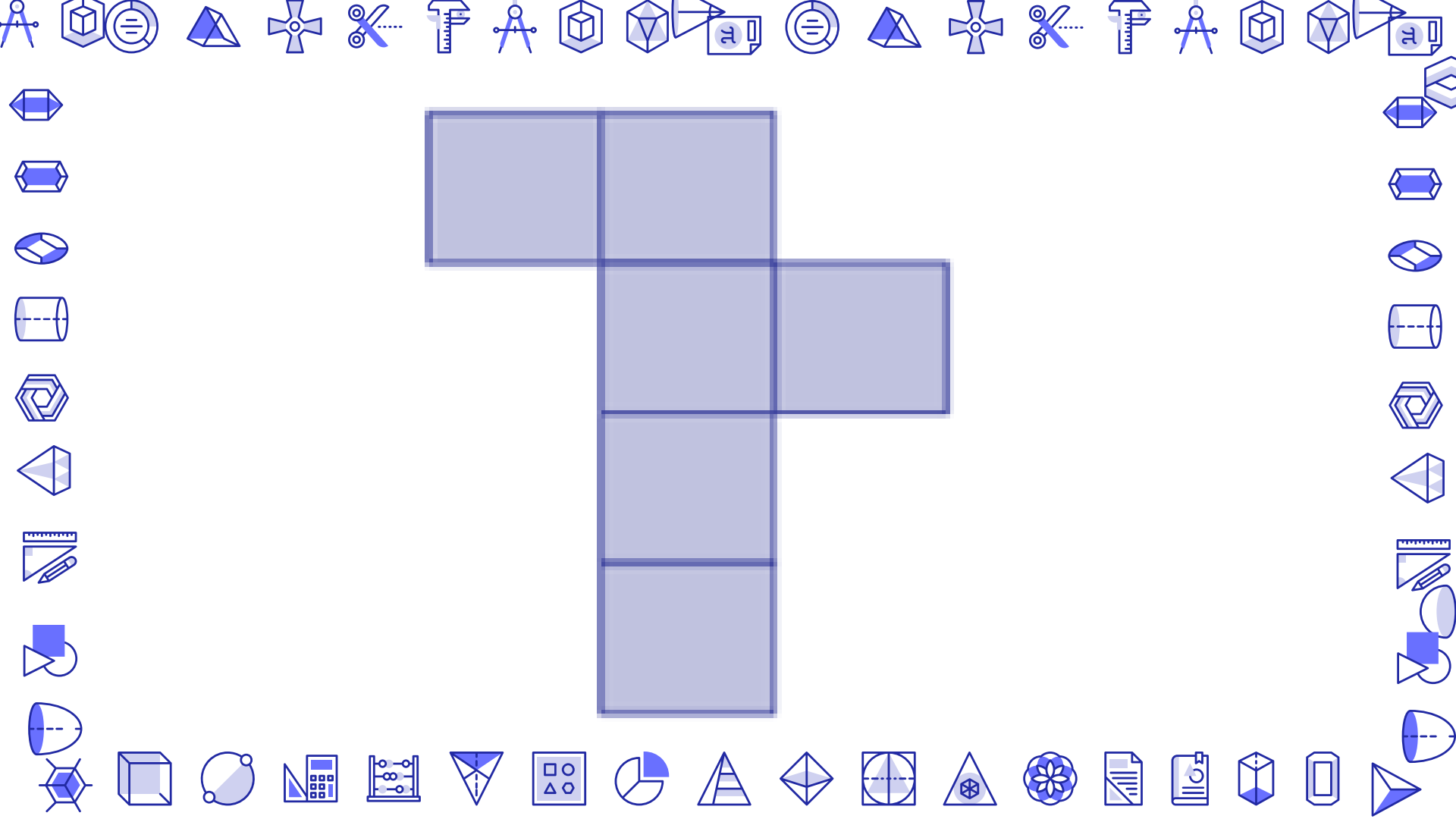
Bir sınıf öğretmeni, öğrencilerine aşağıdaki şekilleri göstererek hangilerinin katlandığında küp oluşturabileceğini sormuştur. Öğrencilerden sadece Neva tüm küp açınımlarını belirleyebilmiştir.

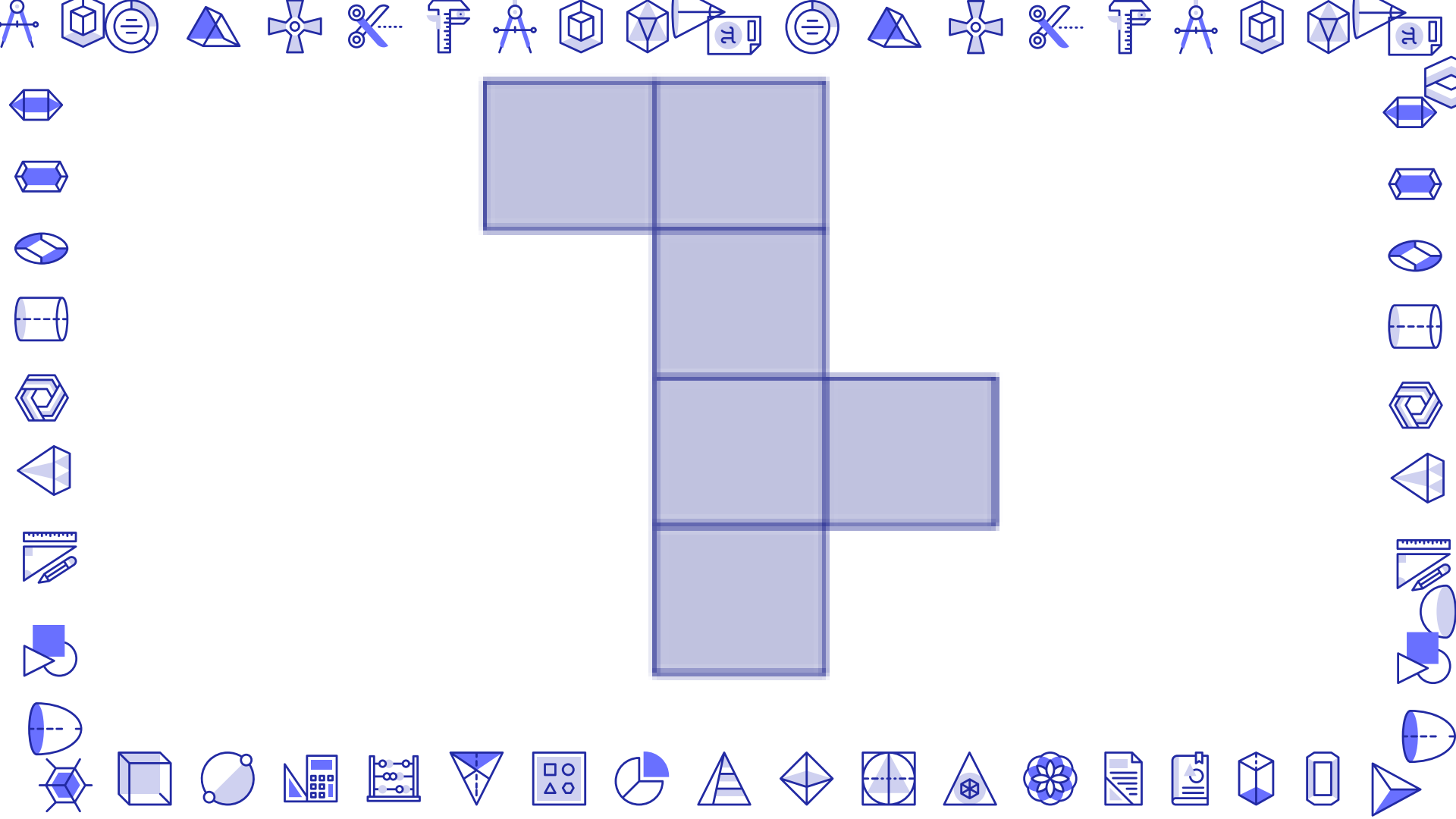


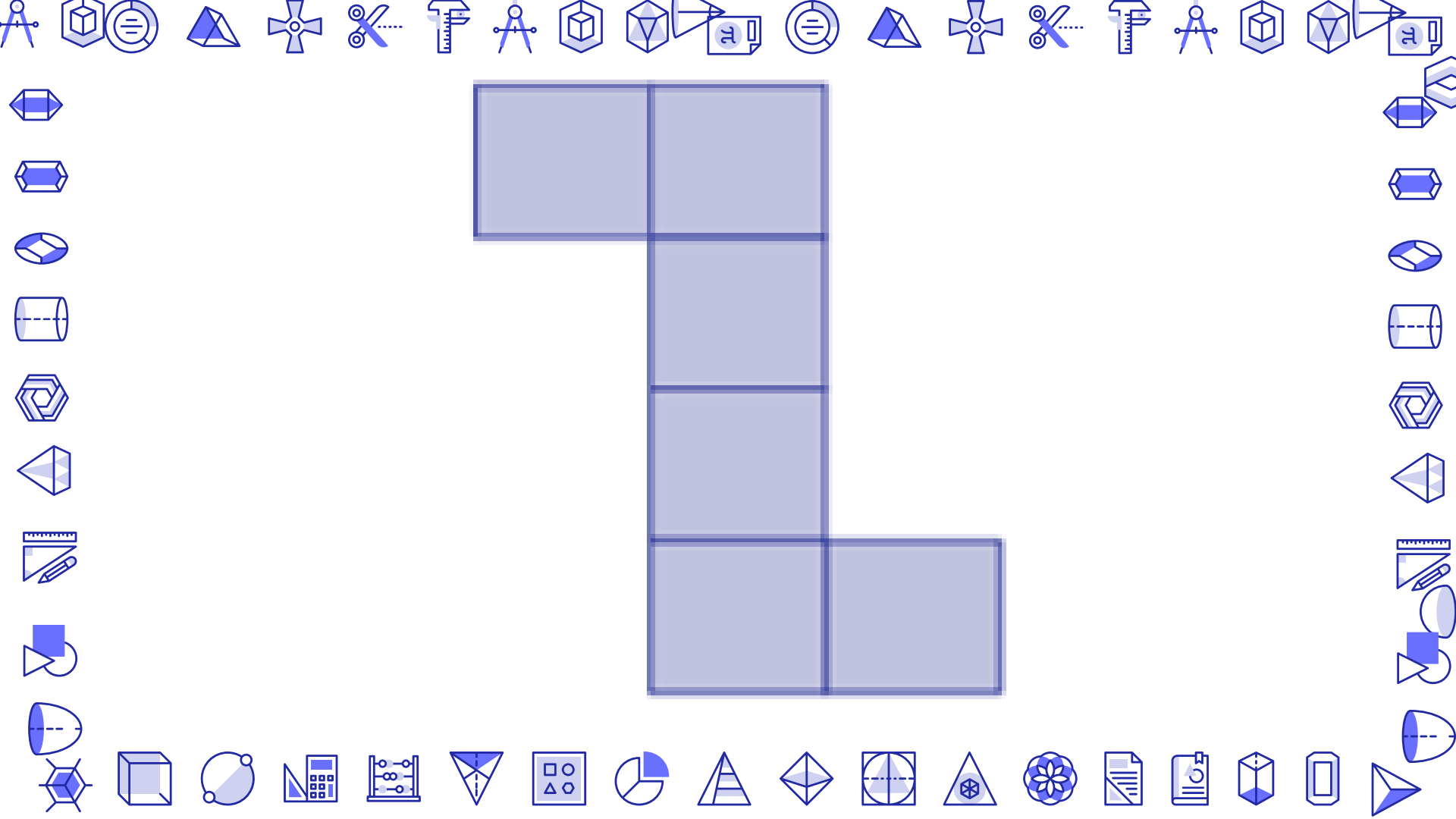
Buna göre Neva hangi şekilleri seçmiştir?

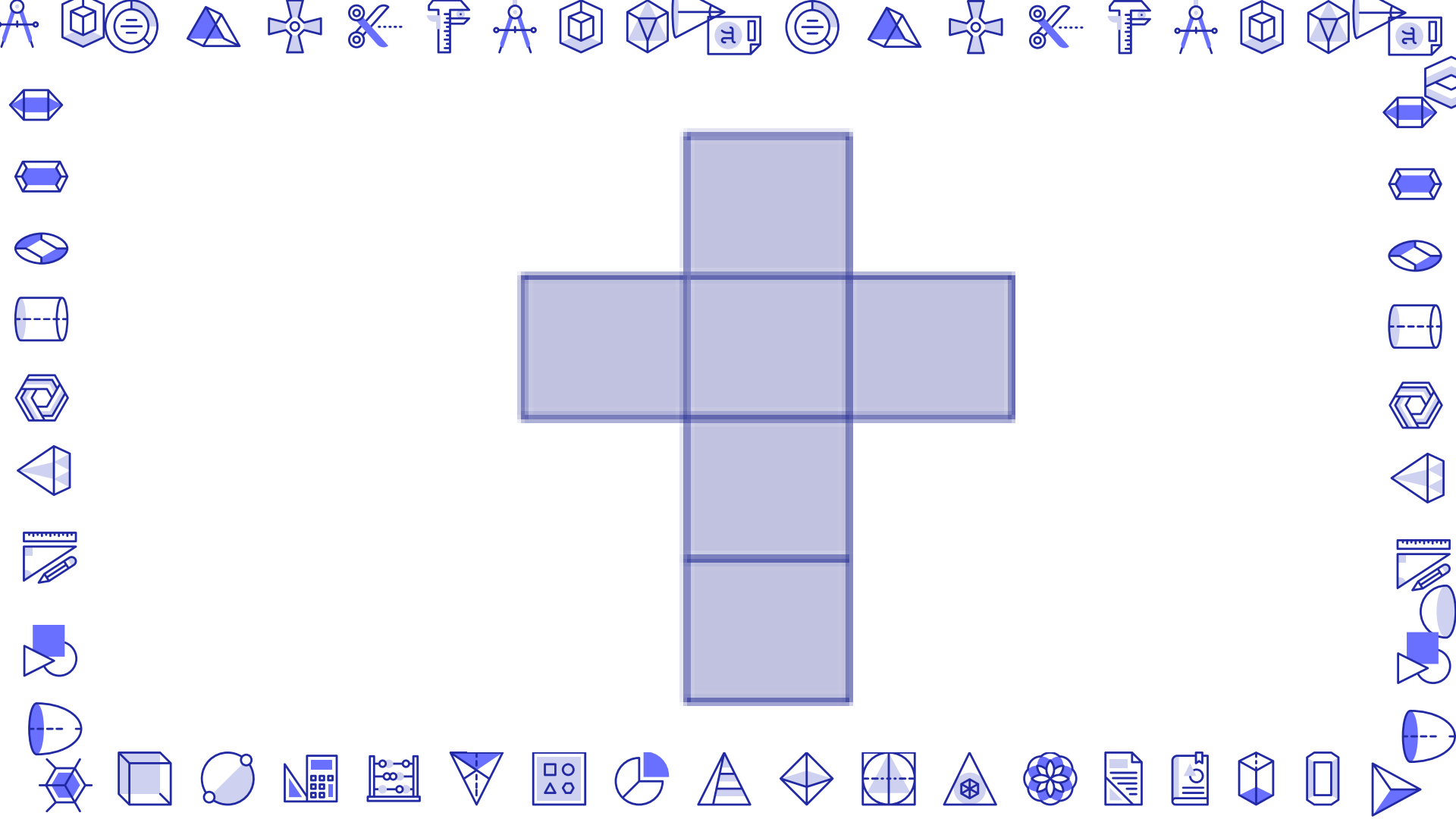
- A) I ve II
- B) I, II ve III
- C) I ve IV
- D) II, III ve IV
- E) III ve IV

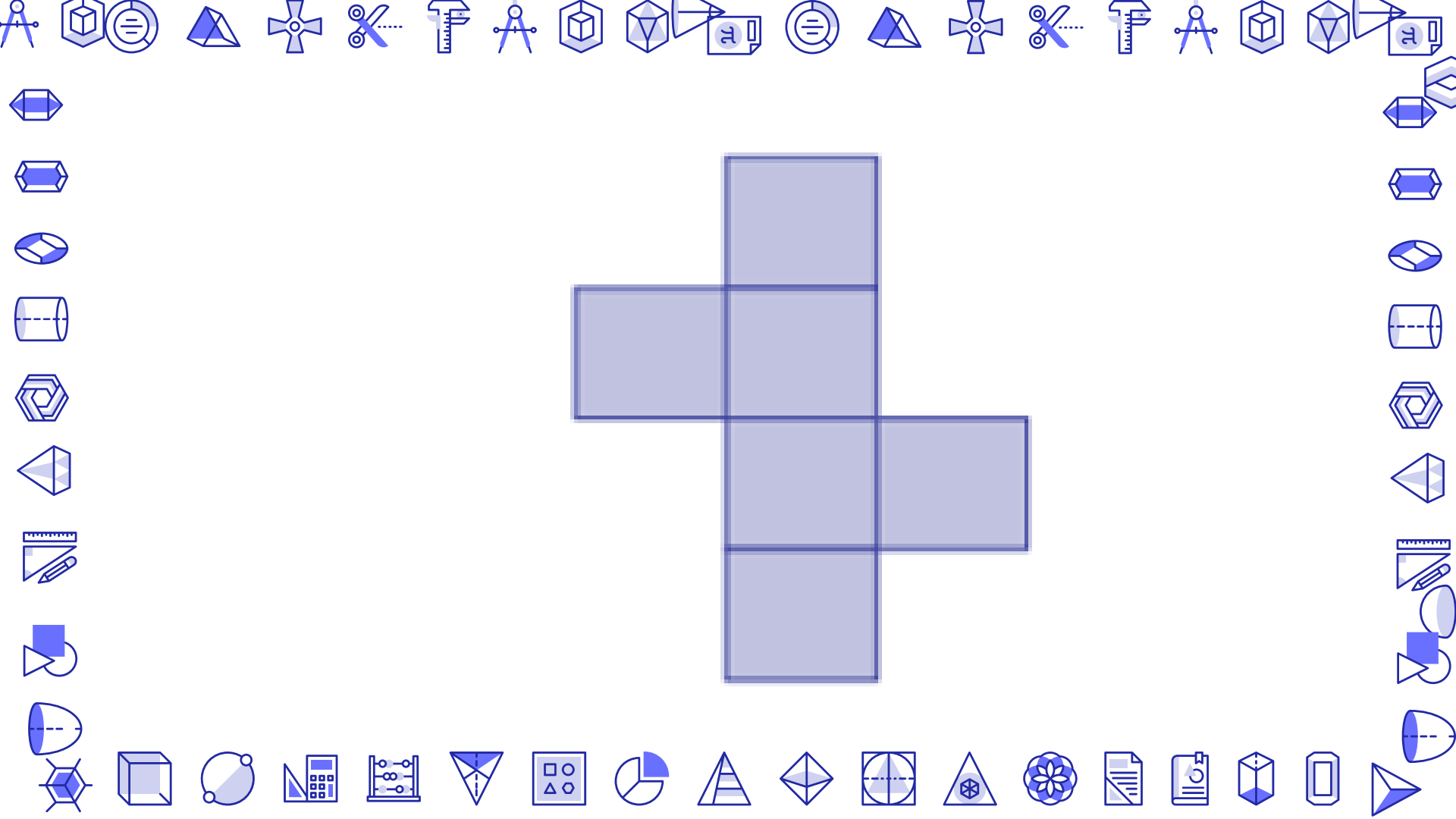


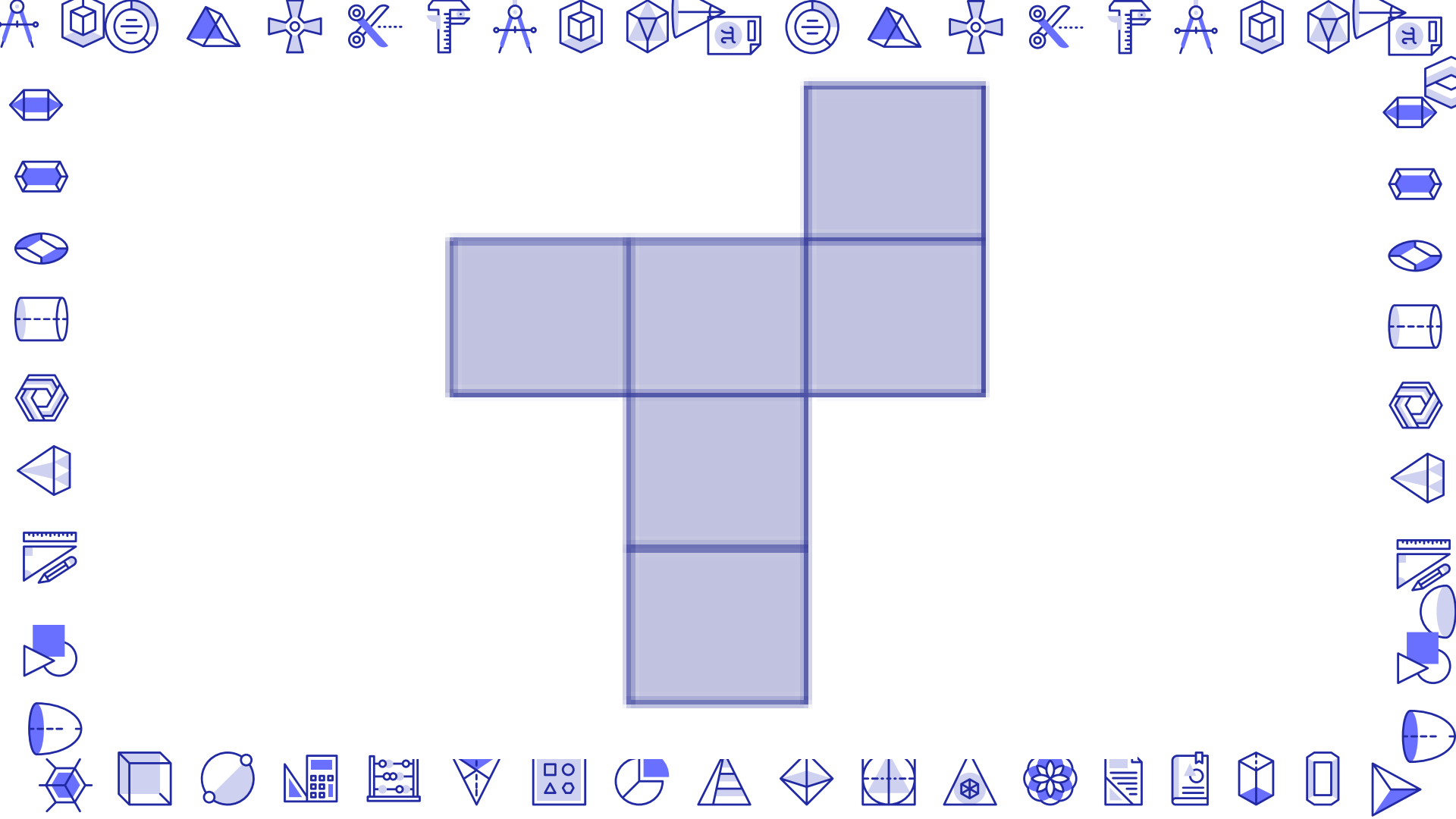


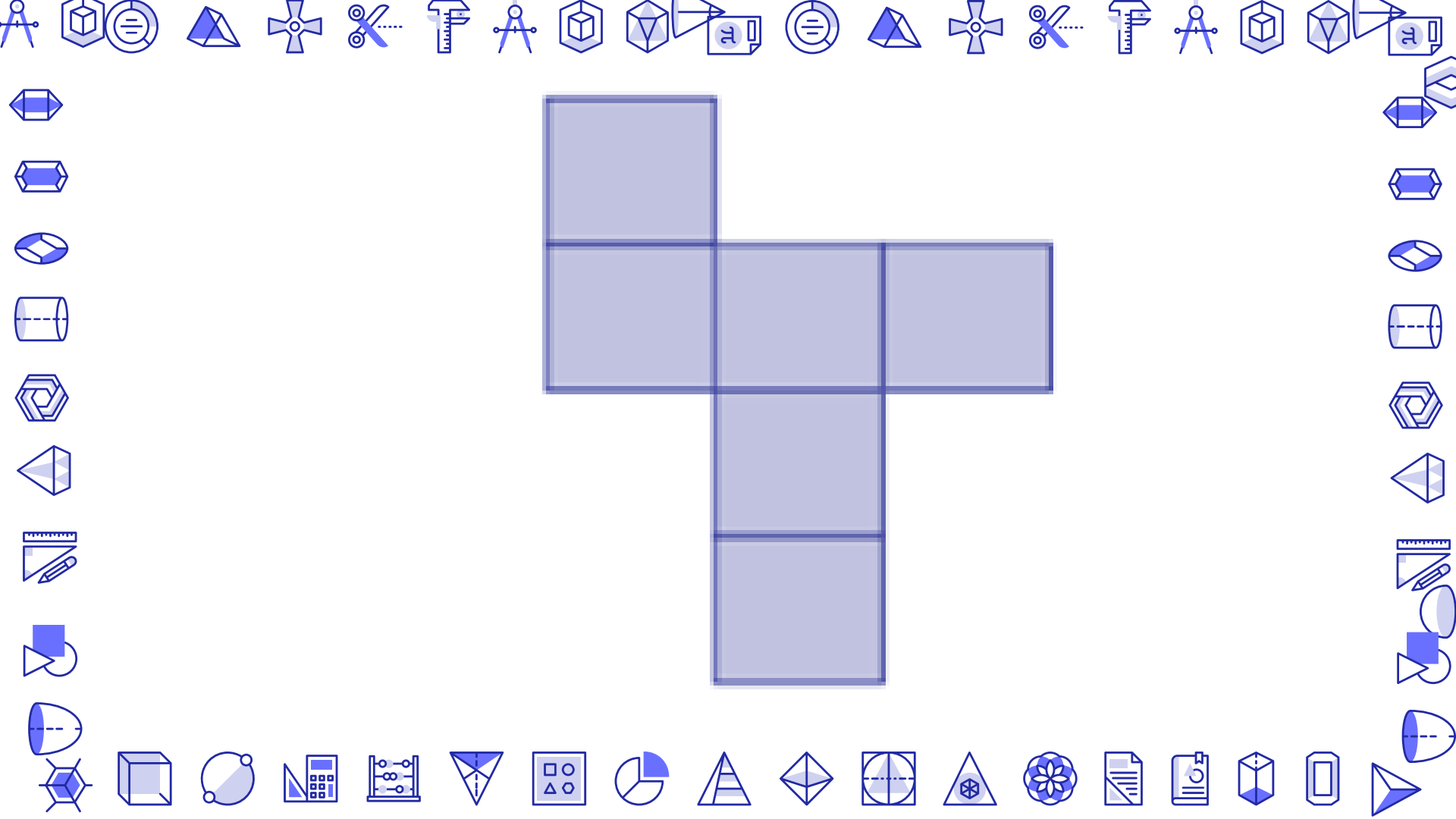


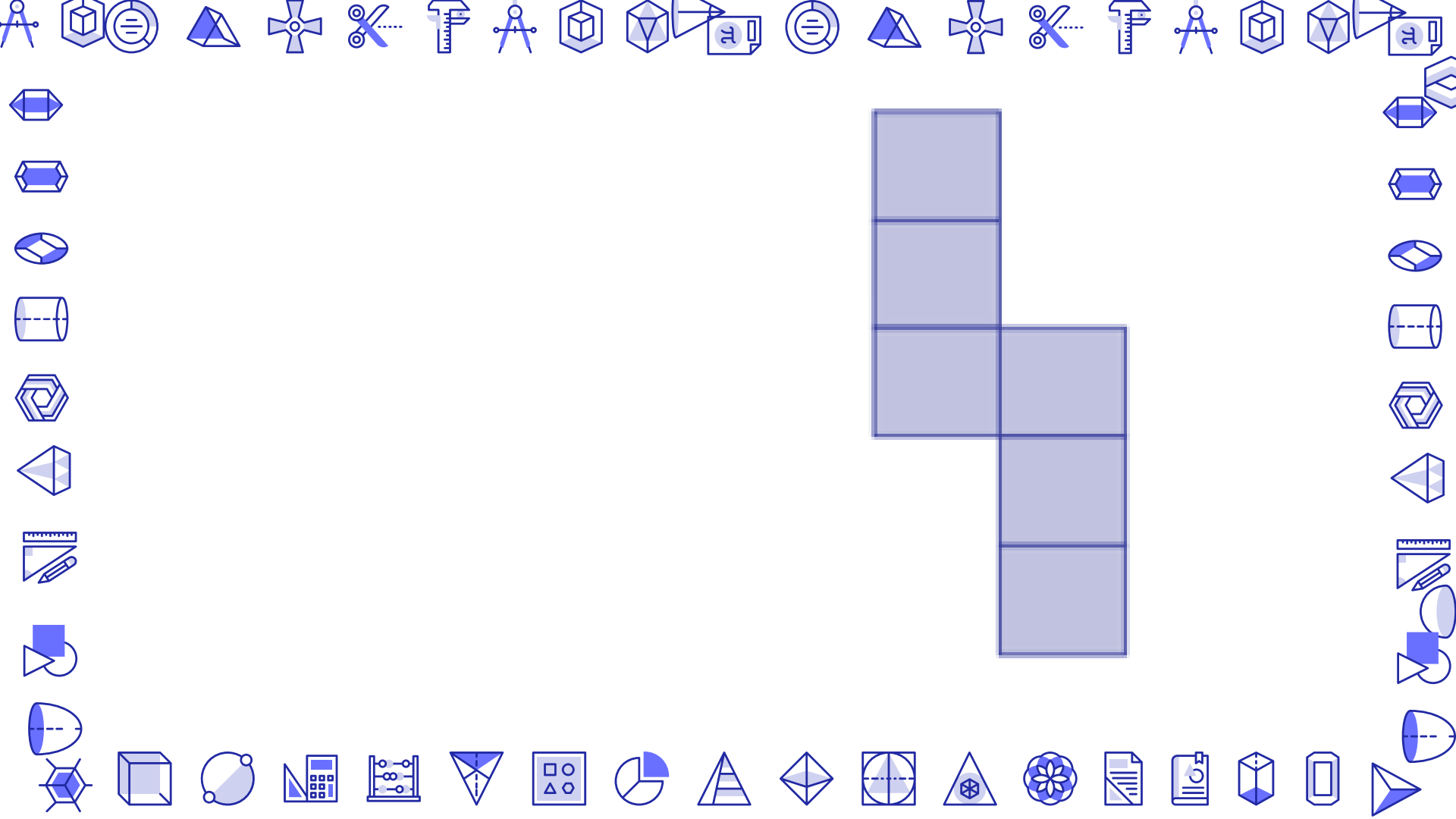


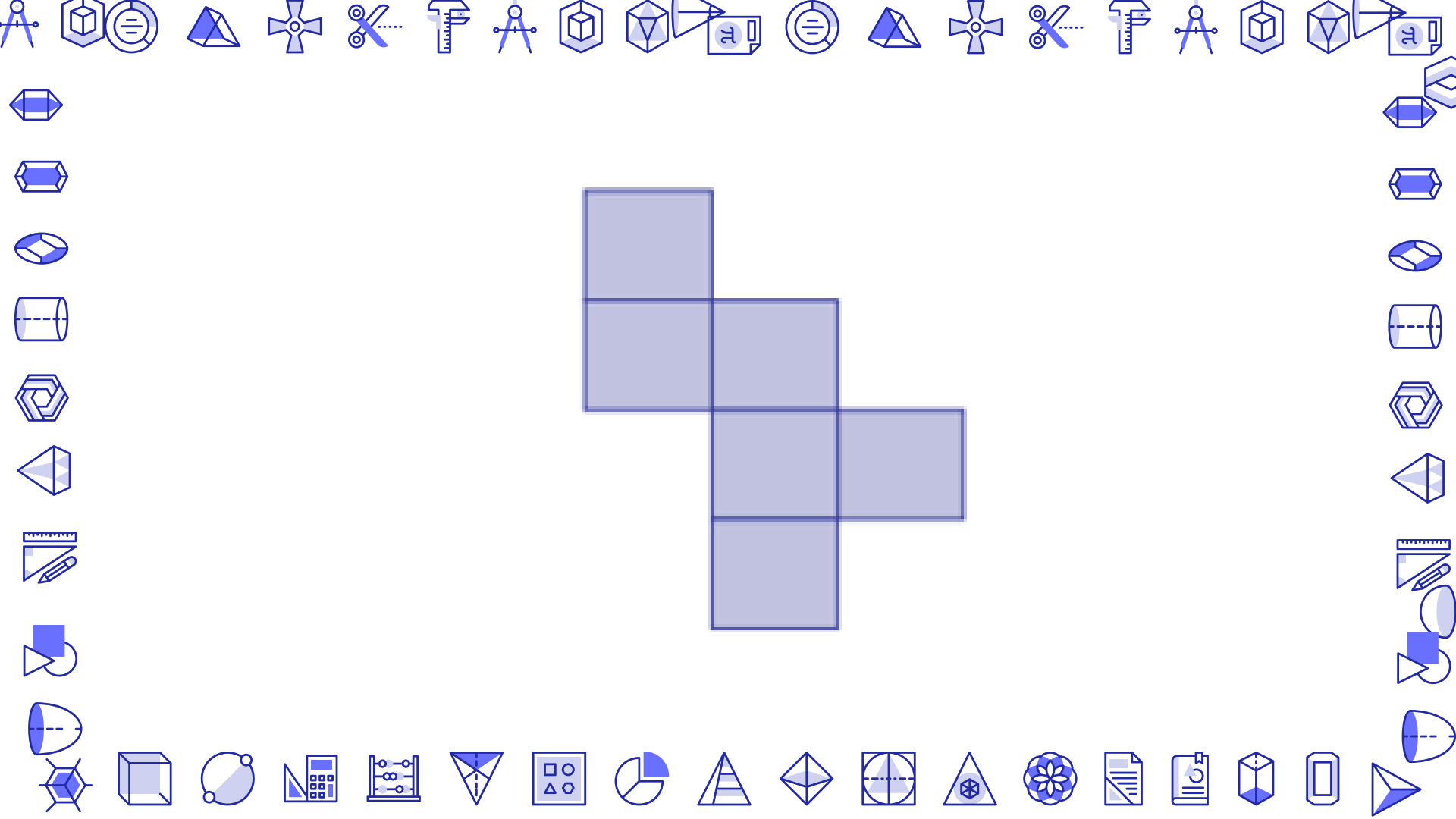


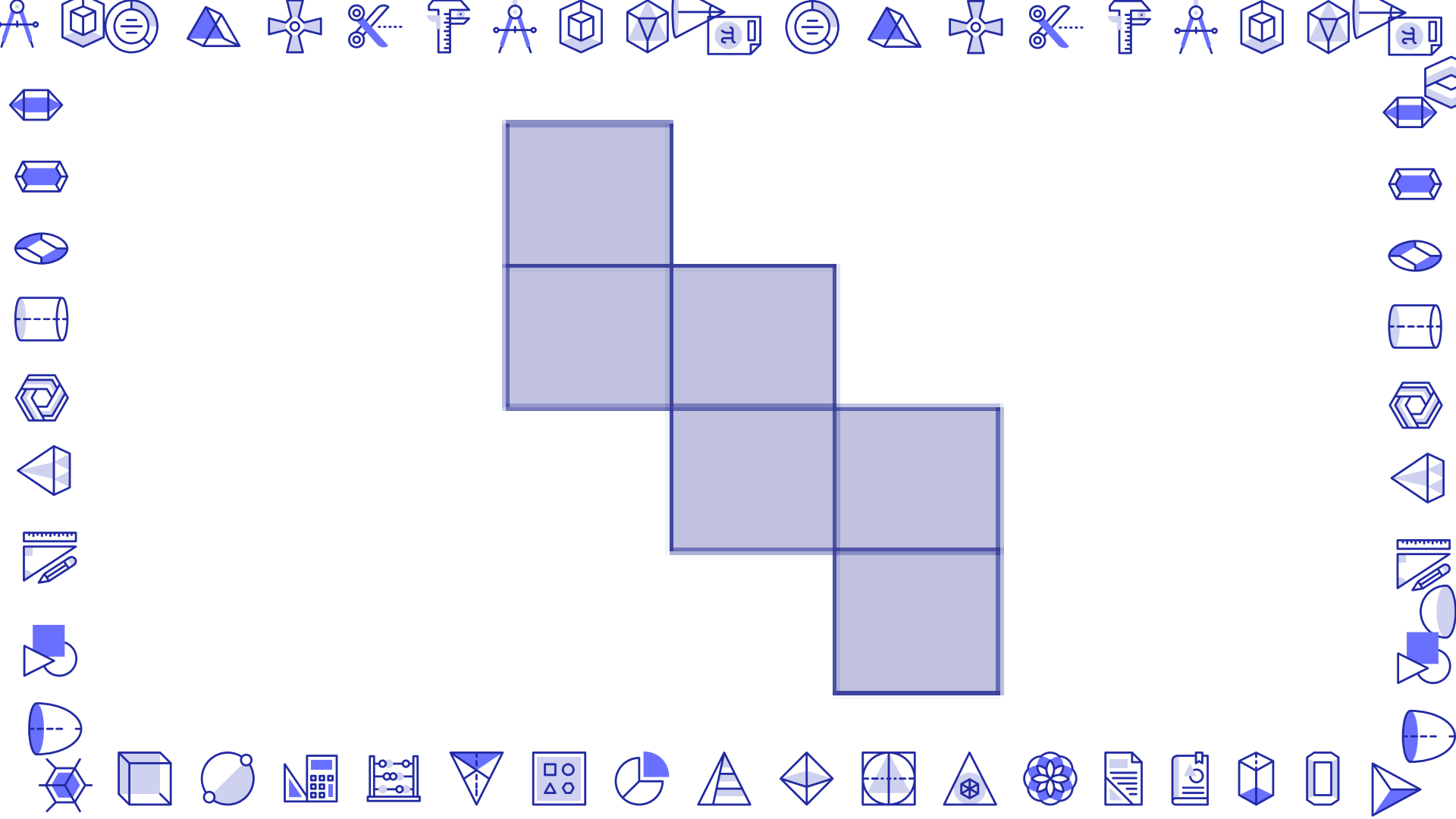


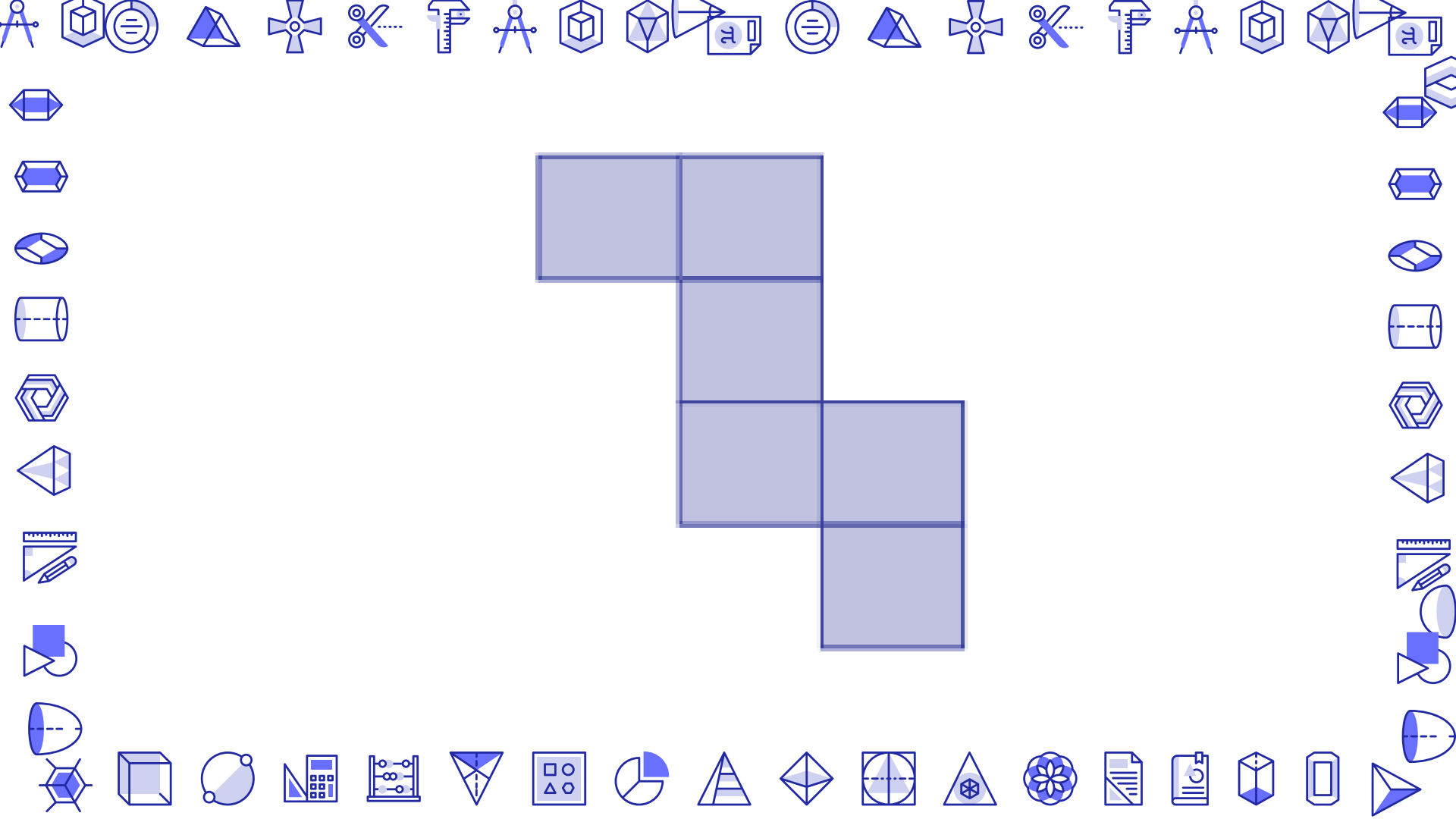






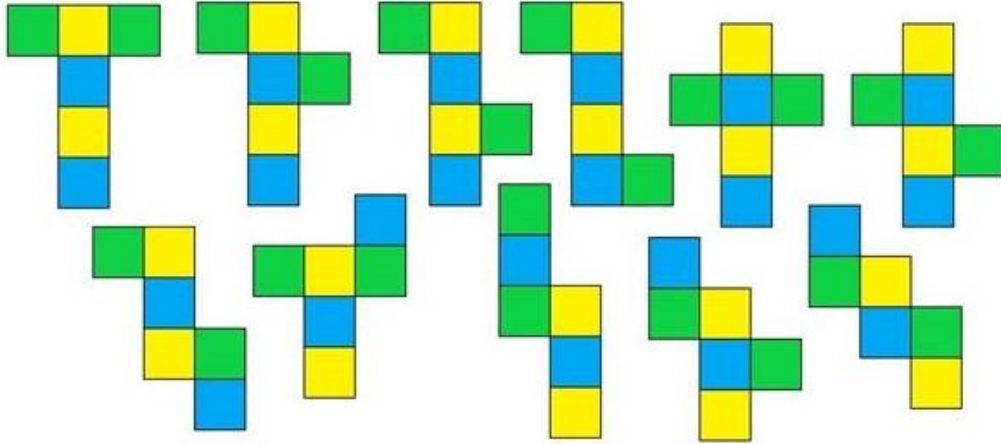




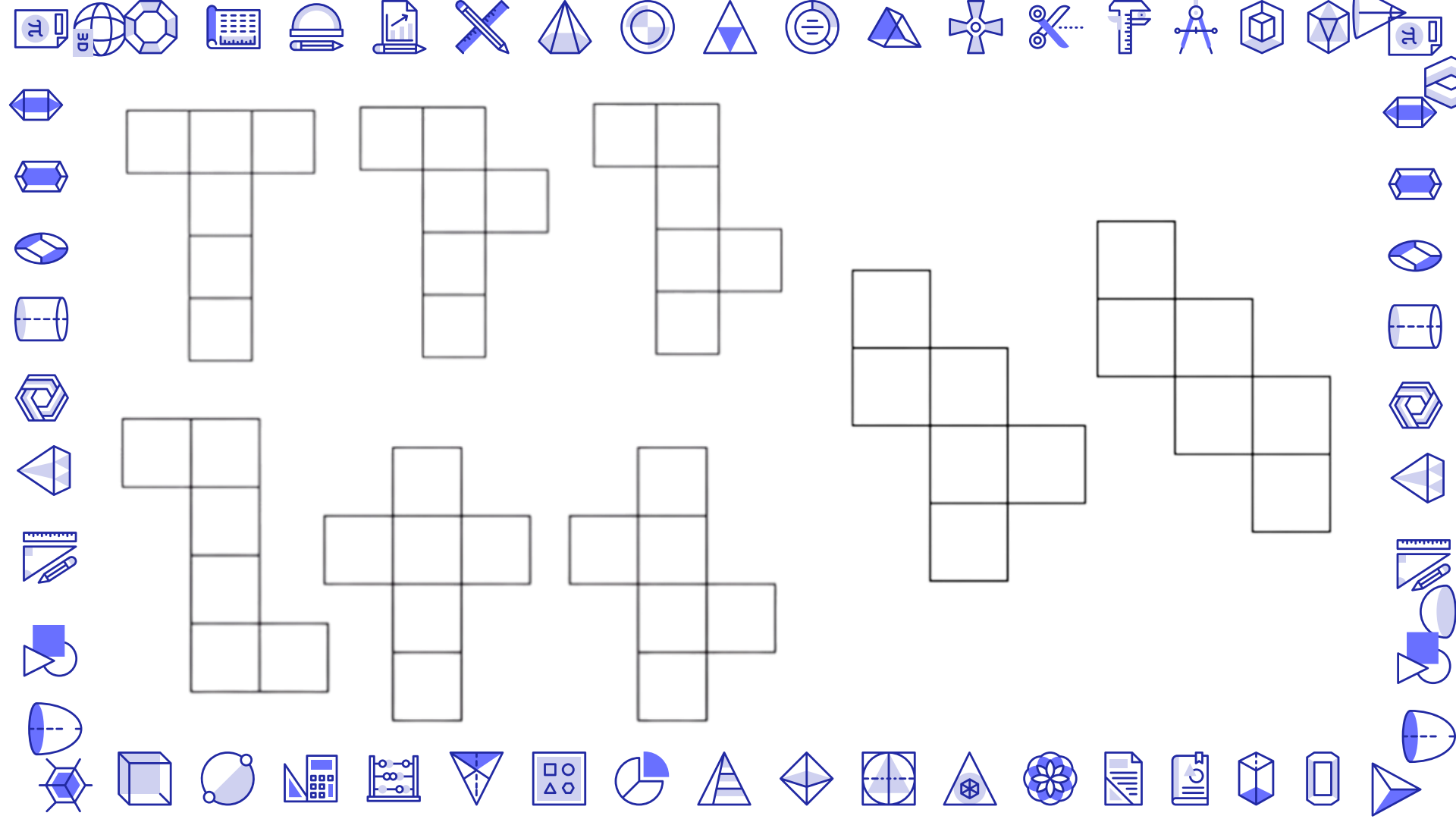


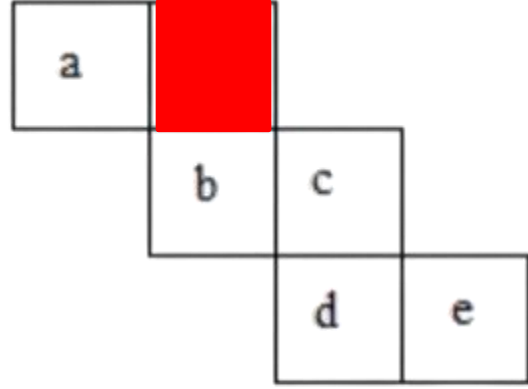
Küpün Açınımı

Küpü açarsak **6** eş kareden oluştuğunu görebiliriz. Yalnız 6 eş kareden oluşmuş her açınım bir küpün açınımı olmayabilir.

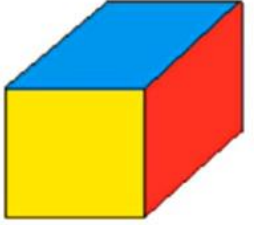


Yukarıda bir küpün açınımı olabilecek **11** şekil verilmiştir. Bu şekiller çizgilerinden doğru bir şekilde katlanıldığında bir küp oluşturabilirler. Katlarken karşılıklı yüzlerin aynı renkte olmasına dikkat edelim.



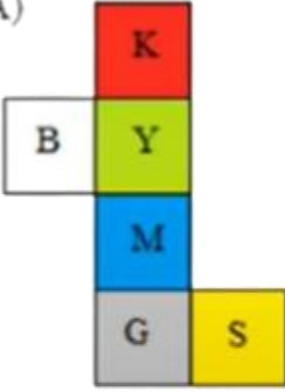


Renkli kare küpün ön yüzü ise , küpün arka yüzü hangisidir?

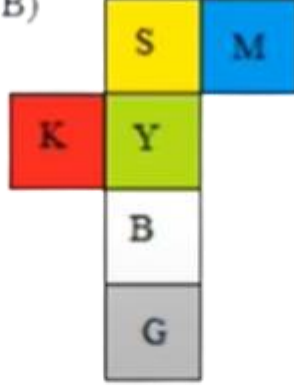


Küpün açınımı aşağıdakilerden hangisidir?

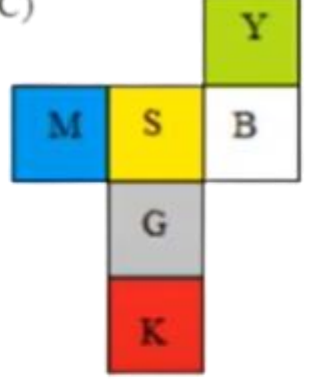
A)



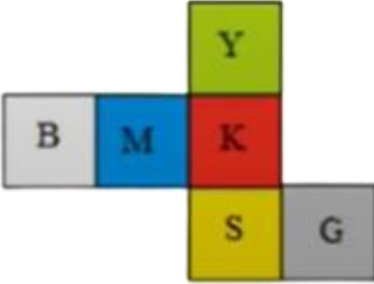
B)



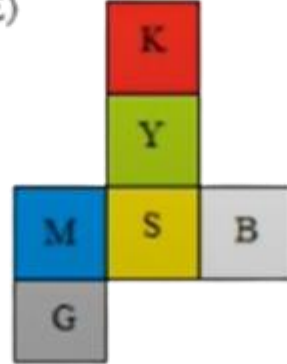
C)

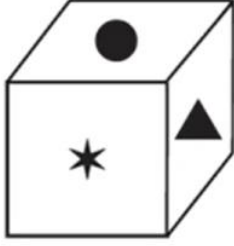


D)

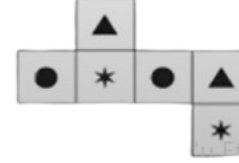
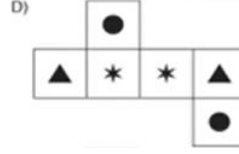
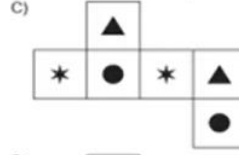
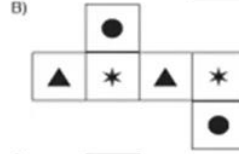
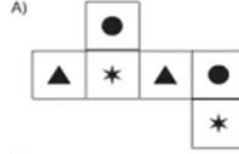


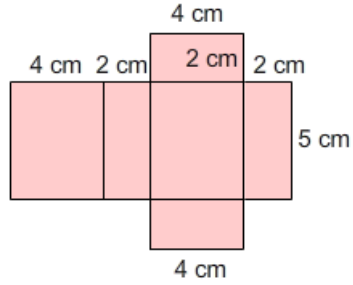
E)



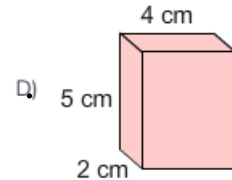
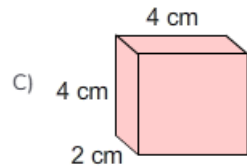
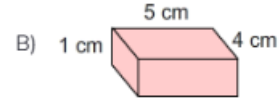
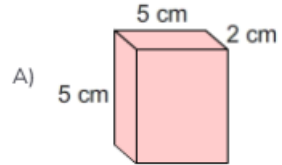


Şekildeki küpün karşılıklı yüzeyine aynı geometrik şekiller çizilmek üzere her yüzeyine bir geometrik şekil çizilmiştir.
Küpün açık şekli aşağıdakilerden hangisidir?



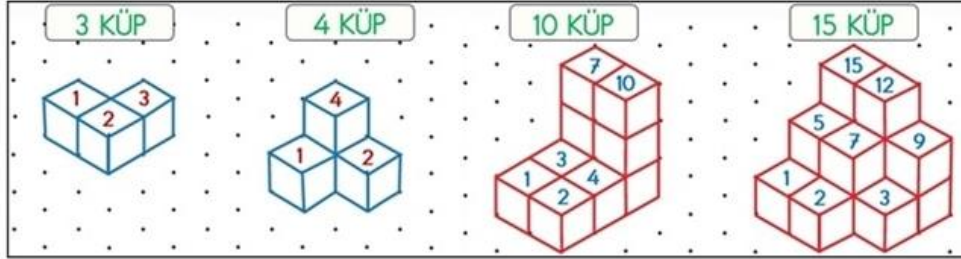


Yukarıdaki şekilde açılımı verilen dikdörtgenler prizması aşağıdakilerden hangisidir?

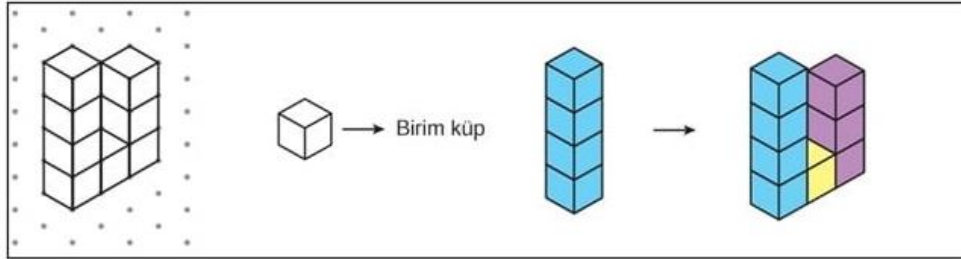


Eş Küplerle Yapılar Oluşturma

İzometrik veya kareli kâğıtta çizimi verilen yapılar, birim küpler kullanılarak oluşturulabilir.



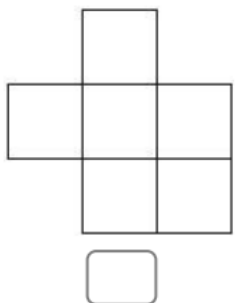
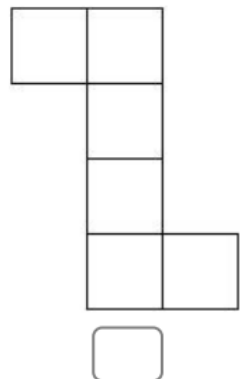
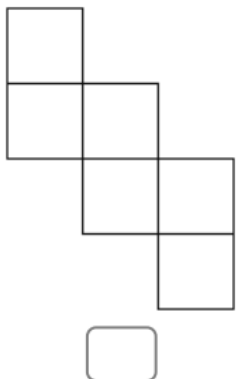
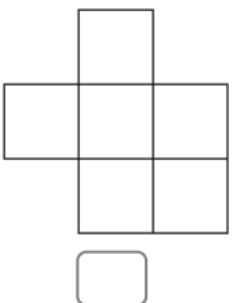
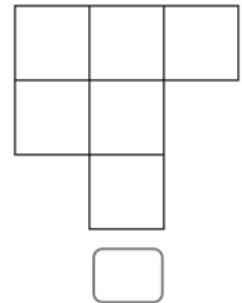
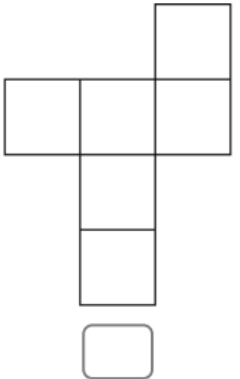
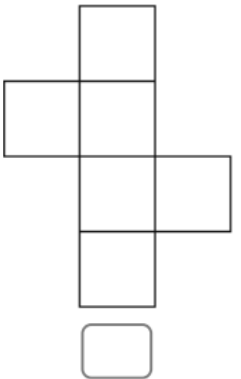
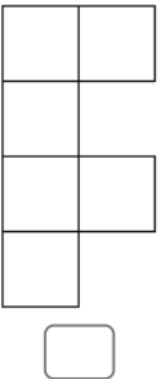
Aşağıda izometrik kâğıtta çizimi verilen yapıyı birim küplerle oluşturalım.



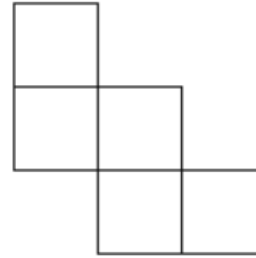
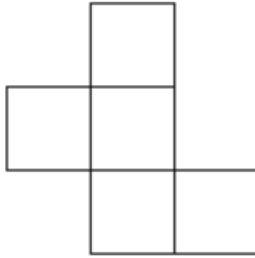
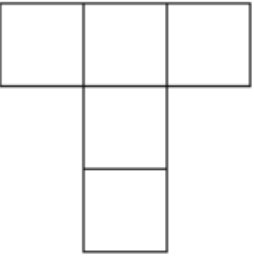
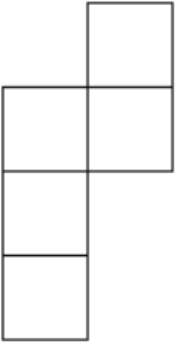
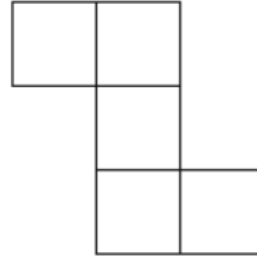
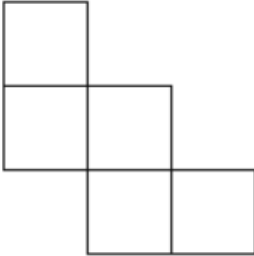
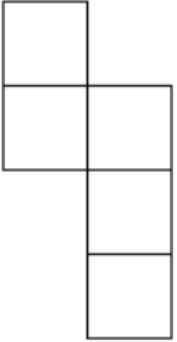
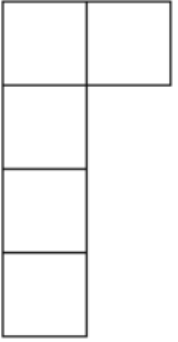
Önce, 4 adet birim küpü üst üste yerleştirelim. Sonra, 4 adet birim küpün yanına 1 adet, onun yanına da 3 adet birim küpü üst üste yerleştirelim. İzometrik kâğıtta çizimi verilen yapı toplam 8 adet küpten oluşmaktadır.

**Sıra Sizde,
Pekiştirelim.**

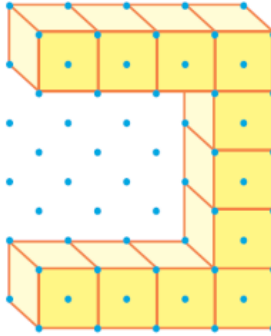
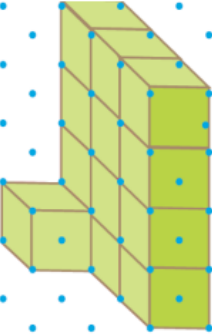
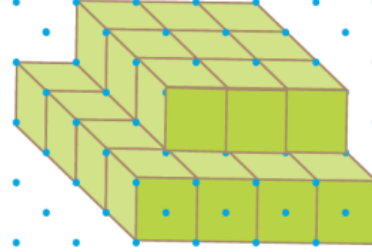
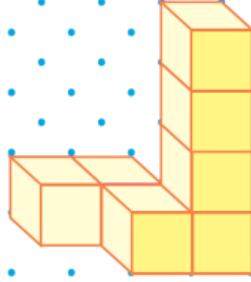
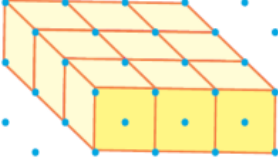
Aşağıda verilen açınımlardan bir küpe ait olanları işaretleyelim.



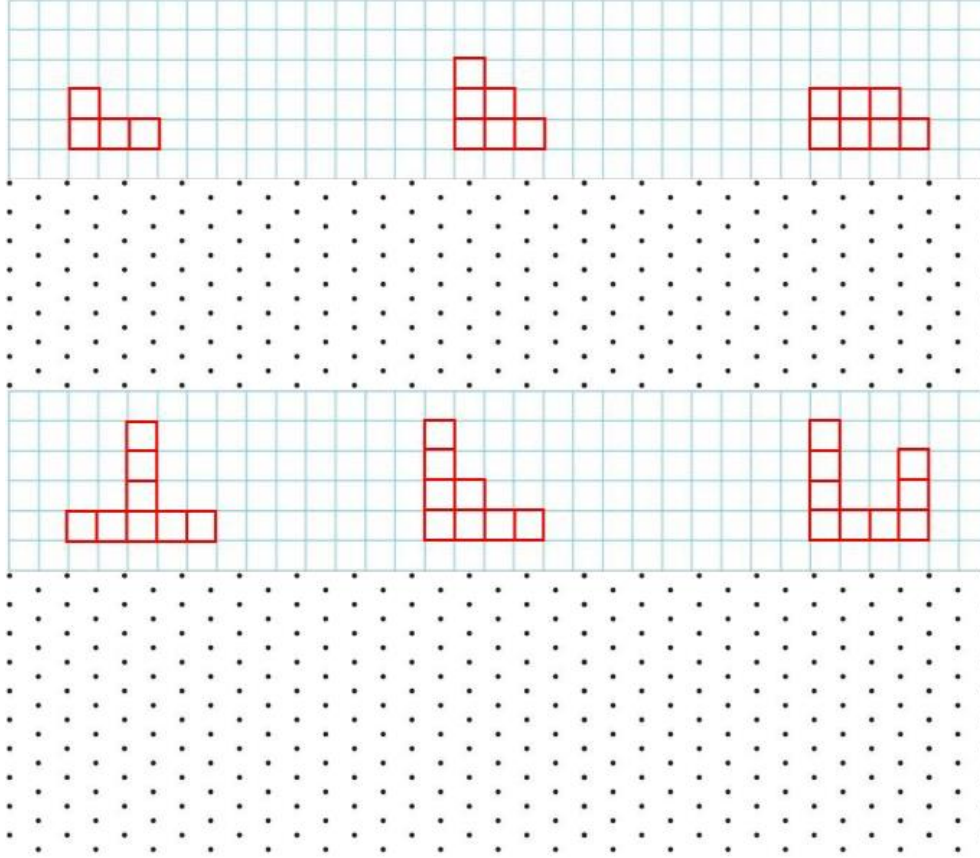
Aşağıda verilen açınımların bir küpe ait olması için eksik olan kareler nelerdir?



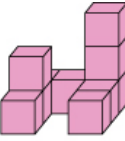
Aşağıda izometrik kâğıtta verilen yapıların kaç birim küple oluşturulduğunu bulalım.



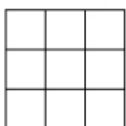
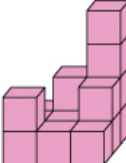
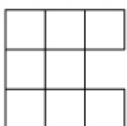
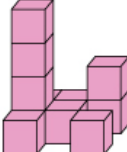
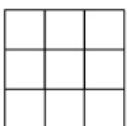
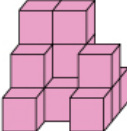
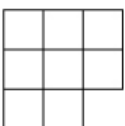
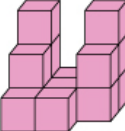
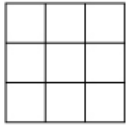
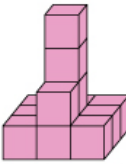
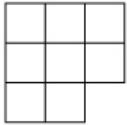
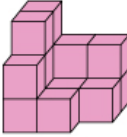
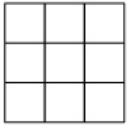
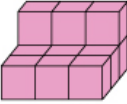
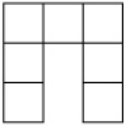
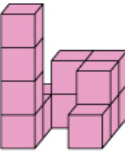
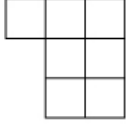
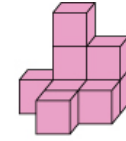
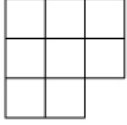
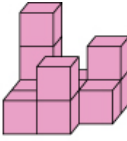
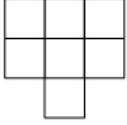
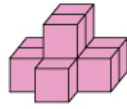
Kareli kâğıtta önden görünümü verilen yapıları izometrik kâğıda çizelim.



Aşağıdaki yapıların her sütununda kaç küp olduğunu yazınız.



1	1	3
2		1
1		1



Sevgili SSTV'liler, açınımı verilen küpleri eşleştiriniz😊

