

1-Aşağıda I. sütunda bir dizi sembol verilmiştir. Bu sembollerin her biri ise bir rakamı göstermektedir. II. sütunda ise bu sembollerin bir araya gelerek oluşturduğu sayılar yer almaktadır.

$\Delta \odot \triangle \square \bullet$	}	719428	985123
$\square \ast \triangle \odot \triangle$			
$\square \triangle \theta \triangle \odot$			
$\ast \triangle \bullet \square \odot \odot$			
$\bullet \triangle \theta \theta \odot \square$			
		537829	891432

**Yukarıdaki sembollerin ifade ettiği sayılar dikkate alındığında aşağıdaki sembollerin ifade ettiği sayı hangisidir?**

$\odot \square \bullet \ast \theta \triangle = ?$

- A) 815672                      B) 975234  
 C) 297543                      D) 435879  
 E) 345971

1-Some symbols are given in the 1<sup>st</sup> column. Each symbol represents a number. In the 2<sup>nd</sup> column, there are numbers that these symbols form together

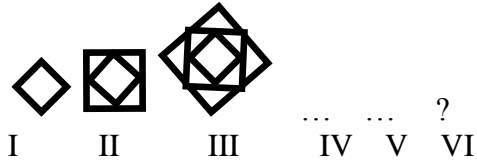
$\Delta \odot \triangle \square \bullet$	}	719428	985123
$\square \ast \triangle \odot \triangle$			
$\square \triangle \theta \triangle \odot$			
$\ast \triangle \bullet \square \odot \odot$			
$\bullet \triangle \theta \theta \odot \square$			
		537829	891432

**When the numbers that symbols form are considered, what is the number referring to the symbols below?**

$\odot \square \bullet \ast \theta \triangle = ?$

- A) 815672                      B) 975234  
 C) 297543                      D) 435879  
 E) 345971

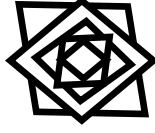
2-Aşağıda ilk üç adımı verilen bir fraktalın VI. adımında alacağı şekil hangisi olacaktır?



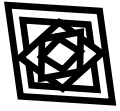
A)



B)



C)



D)



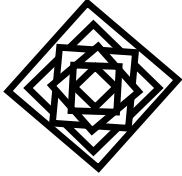
E)



2- The first three steps of fractal are given below. Which of the following is the right shape for the step VI?



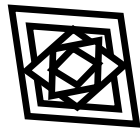
A)



B)



C)



D)



E)



3-Aşağıdaki matriste harfler arasında işlem X ile belirlenmiştir.

x	a	b	c	d
a		8a		
b			32	
c				24
d	2a			

**Tablodaki her bir sayı pozitif tam sayı olduğuna göre a=?**

- A) 8   B) 6   C) 5   D) 3   E) 2

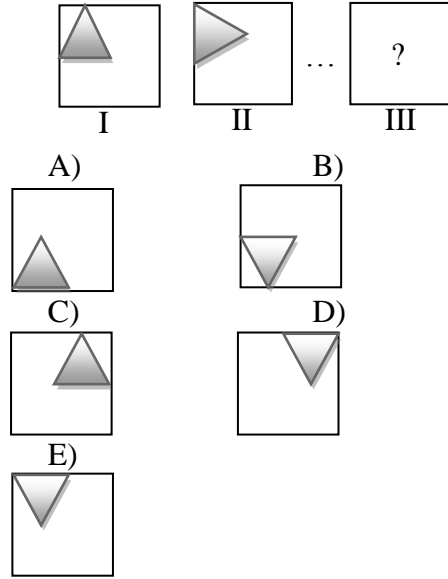
3-In the following matrix, the operation X is defined among letters.

x	a	b	c	d
a		8a		
b			32	
c				24
d	2a			

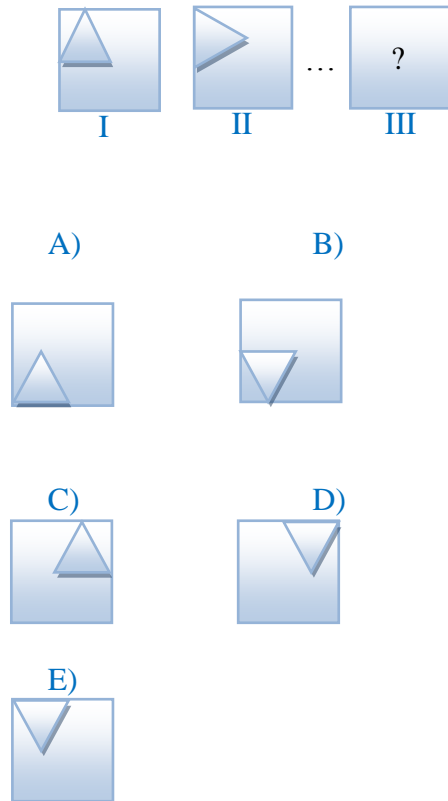
**Each number in the table represents a positive integer. So a=?**

- A) 8   B) 6   C) 5   D) 3   E) 2

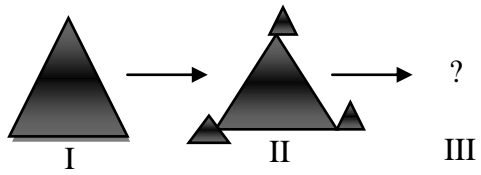
4-Aşağıdaki şekil matrisinde III. adıma getirilecek şekil hangisi olmalıdır?



4-According to the matrix below, what is the right shape for the 3<sup>rd</sup> step (the place where the question mark is)?

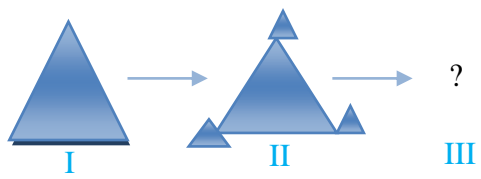


5-Örüntünün üçüncü adımında hangi şekil olur?



- A)
- B)
- C)
- D)
- E)

5-What is the 3<sup>rd</sup> step of the pattern below?



- A)
- B)
- C)
- D)
- E)

6-Aşağıda A ve B sayılarının fonksiyonu verilmiştir.

$$f(A) = X/Y$$

Örnek:  $F(12) = 1/2$

$$f(B) = W+Z$$

Örnek:  $f(45) = 4+5$

**Aşağıdaki fonksiyonda  $f(B) = 9+7$  olduğuna göre**

$$\frac{f(B)}{f(A)} =$$

**işleminin en yüksek değer alabilmesi için  $f(A)$  kaç olmalıdır?**

- A) 1/2      B) 3/4      C) 4/5  
D) 7/8      E) 9/10

6-The functions for A and B are given below.

$$f(A) = X/Y$$

Example:  $F(12) = 1/2$

$$f(B) = W+Z$$

Example:  $f(45) = 4+5$

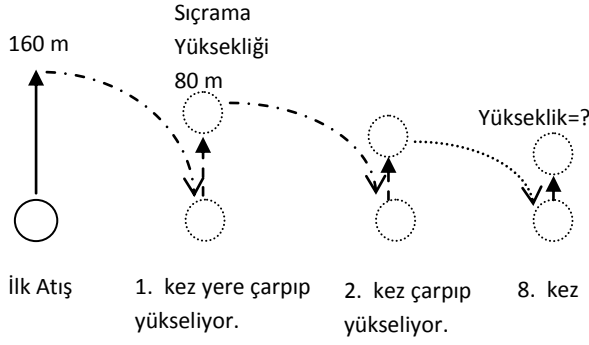
**The following function is  $f(B) = 9+7$ , so**

$$\frac{f(B)}{f(A)} =$$

**what should  $f(A)$  be to get the highest value for this operation?**

- A) 1/2      B) 3/4      C) 4/5  
D) 7/8      E) 9/10

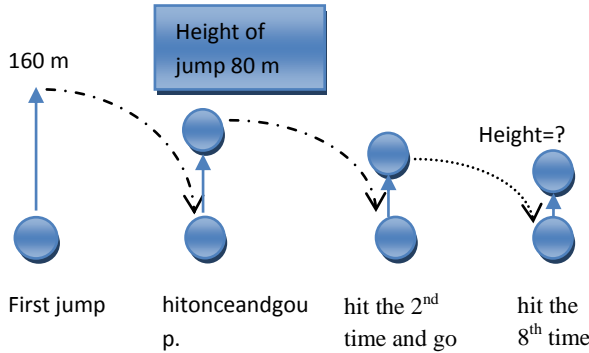
8-Bir top havaya atılıp yere düştüğünde atıldığı yüksekliğin 1/2'si kadar yükseliyor. Yere çarpıp zıplayan top yere her çarptığında bir önceki yüksekliğin 1/2'i kadar yükseliyor.



**Top 8. kez sıçramada kaç cm (santimetre) yükselir?**

- A) 62,5 cm      B) 12,5 cm  
C) 125 cm      D) 312,5 cm  
E) 31,25 cm

7-When a ball is sent up and then hits the ground, it jumps until  $\frac{1}{2}$  of the height of the previous one. It is the same for all bounces.



**How many cm (centimeter) high does the ball go up when it hits the ground for the 8<sup>th</sup> time?**

- A) 62,5 cm      B) 12,5 cm  
C) 125 cm      D) 312,5 cm  
E) 31,25 cm

9-

$$5 * 3 = 18, 7 * 8 = 64,$$

$$3 * 5 = 20 \Rightarrow (-2) * 8 = ?$$

A) 8    B) 10    C) 12    D) -8    E) -10

10-

$$f(x)=x^2, g(x)=3x+5 \Rightarrow$$

$$(g \circ f \circ g^{-1})(x) = ?$$

A)  $3 \cdot x^2 + 5$

B)  $\frac{x^2 - 10 \cdot x + 40}{3}$

C)  $9 \cdot x^2 + 30 \cdot x + 25$

D)  $x^2 - 10 \cdot x + 25$

E)  $\frac{x^2 - 10 \cdot x + 25}{3}$

11-

$$\frac{(x-3) \cdot (x^2 - x - 2) \cdot (x^2 - 4)}{(x^2 - 1) \cdot (x^2 - x - 6) \cdot (2 - x)} = ?$$

A)  $\frac{x-3}{x-1}$     B)  $\frac{x-2}{x-1}$     C)  $\frac{2-x}{x-1}$     D)  $\frac{x-1}{x-3}$     E)  $\frac{3-x}{x-1}$

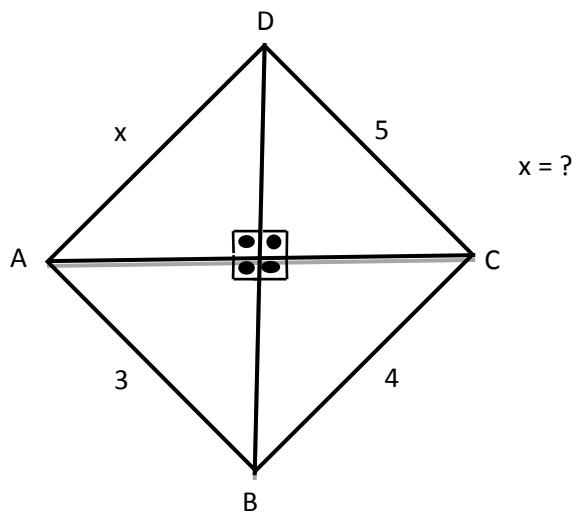
12-

$$\sqrt{(-4)^2} - \sqrt[3]{(-5)^3} + \sqrt[5]{(-1)^5} - \sqrt{16} = ?$$



- A) 0    B) 2    C) 4    D) 6    E) 8

13-



- A) 6    B)  $3\sqrt{2}$     C)  $2\sqrt{3}$     D) 8    E) 10