

همراه شما  
در مسیر یوس

# نمونه سوال یوس

## دانشگاه مارمارا



Marmara University

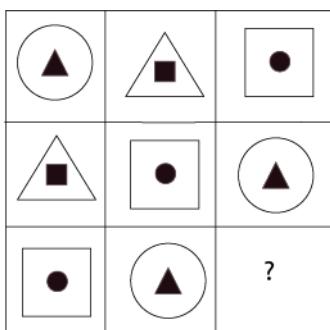
INTERNATIONAL STUDENTS' EXAM

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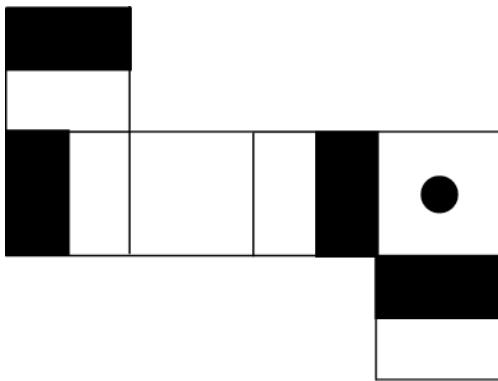
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In the following question, find the figure whichs the question mark (?) stands for in the given matrix.



- A)   B)   C)   
 D)   E)

In the following question, which picture cube does the given shape form?



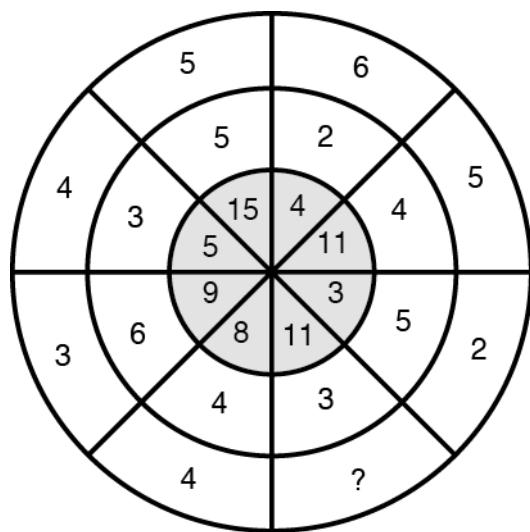
- A)   B)   C)   
 D)   E)

In the following question, find the figure which the question mark (?) stands for in the given figure sequence.

2	3	5	6
7	?	?	11
15	?	18	19
20	21	23	24

- A)   B)   C)   
 D)   E)

In the following question, find the number which replaces the question mark (?) and completes the sequence



- A) 3   B) 4   C) 5   D) 6   E) 7

I.

T	O	S	P
R	O	T	P
P	T	S	R
P	E	O	R
E	O	T	R

II.

- 4516  
6254  
5214  
4326  
3256

$$\boxed{T \ P \ R \ O} = ?$$

- A) 1256      B) 4263      C) 2643  
D) 5462      E) 3524

$$\frac{(m+n)(m^2-n^2-1)!}{[(m-n)(m+n)]!} = ?$$

- A)  $\frac{1}{m+n-1}$       B)  $\frac{1}{m-n}$       C)  $\frac{1}{m+n}$   
D)  $\frac{1}{(m-n)!}$       E)  $\frac{1}{m-n+1}$

$$\frac{6^x - 3^x}{2^x - 1} = 3^{2-x} \Rightarrow x = ?$$

- A) -2    B) -1    C) 0    D) 1    E) 2

$$\frac{3,9}{1,3} + \frac{1,11}{0,37} + \frac{0,03}{0,015} = ?$$

- A) 3    B) 5    C) 6    D) 7    E) 8

$$\sqrt{3-\sqrt{2}} \cdot \sqrt[4]{11+6\sqrt{2}} = ?$$

- A)  $\sqrt[3]{7}$       B) 1      C)  $\sqrt{8}$   
D)  $\sqrt{7}$       E)  $\sqrt{14}$

$$A = \{1, 2, 3, 4, 5, 6, 7\}$$

$$B = \{1, 2, 4, 5\}$$

$$C = \{5, 6, 7\}$$

$$C \cup (A - B) = ?$$

- A)  $\{1, 2, 6, 7\}$       B)  $\{1, 2, 3, 5, 7\}$

- C)  $\{5, 6, 7\}$       D)  $\{1, 2, 3, 5, 6, 7\}$

- E)  $\{3, 5, 6, 7\}$

$$f(2^x + 1) = 4^x - 1$$

$$f(x+2) = ?$$

A)  $x(x-2)$       B)  $(x-1)^2$       C)  $x^2 - 1$

D)  $x^2 + 1$       E)  $x(x+2)$

$$3x^2 - 2x + 1 = 0$$

$$9x^2 + \frac{1}{x^2} = ?$$

A)  $-\frac{7}{2}$

B)  $-2$

C)  $-\frac{5}{2}$

D)  $-\frac{3}{2}$

E)  $\frac{1}{2}$

If  $P(x)$  is a polynomial,

$$(x^2 + 1)P(x) = ax^3 + (b - 2)x + a - 1$$

$$a \cdot b = ?$$

- A)  $-3$     B)  $-1$     C)  $0$     D)  $1$     E)  $3$

$$\left. \begin{array}{l} x + 2y + z = 5 \\ 2x - y + z = 7 \\ 9x + 2y + 6z = 40 \end{array} \right\} \Rightarrow x + y + z = ?$$

A)  $-7$

B)  $-3$

C)  $0$

$$i^2 = -1$$

$$\left. \begin{array}{l} z = 2 - 3i \\ w = 1 + 2i \end{array} \right\} \Rightarrow |z + w| = ?$$

- A)  $\sqrt{2}$       B)  $\sqrt{10}$       C) 13  
D) 16      E) 23

$$0 < x < \frac{\pi}{2}$$

$$\sqrt{1 - \sin^2 x} \cdot \sqrt{\left( \frac{1 - \cos 2x}{2} \right)} \cdot \operatorname{cosec} 2x = ?$$

- A)  $\frac{1}{2}$       B)  $-\frac{1}{4}$       C) 1  
D) 2      E)  $\frac{1}{3}$

$$\sin x \cdot \cos x = \frac{1}{4}$$

$$\sin^4 x + \cos^4 x = ?$$

- A)  $\frac{3}{4}$       B)  $\frac{5}{8}$       C)  $\frac{7}{8}$       D)  $\frac{5}{12}$       E)  $\frac{7}{12}$

What is the solution set for the following equation?

$$\begin{vmatrix} \sin 83 & -\cos 23 \\ \cos 83 & \sin 23 \end{vmatrix} = 2x - 1$$

- A)  $\{0\}$       B)  $\left\{ \frac{3}{8} \right\}$       C)  $\{-1\}$   
D)  $\left\{ \frac{3}{4} \right\}$       E)  $\{1\}$

$$\frac{\sin 15^\circ}{\sec 15^\circ} + \frac{\tan 105^\circ}{\cot 15^\circ} = ?$$

- A) -1      B)  $-\frac{3}{4}$       C)  $-\frac{1}{2}$   
D) 0      E)  $\frac{1}{4}$

$$\lim_{n \rightarrow \infty} \frac{1^2 + 2^2 + 3^2 + \dots + n^2}{7(n^3 + n^2 + 1)} = ?$$

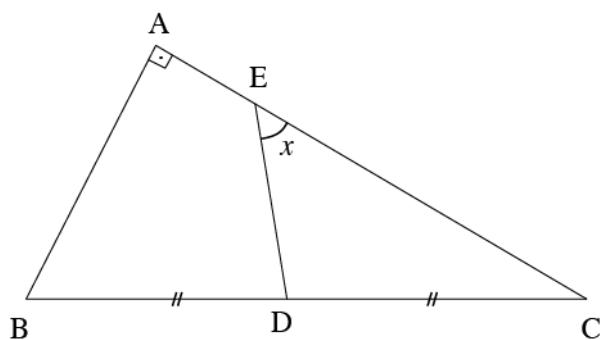
- A)  $\frac{1}{42}$       B)  $\frac{1}{21}$       C)  $\frac{2}{7}$   
D)  $\frac{21}{7}$       E)  $+\infty$

$$\int_0^2 \left( \sqrt{16-x^2} - \sqrt{3}x \right) dx = ?$$

- A)  $\frac{\pi}{3}$       B)  $\frac{\pi}{2}$       C)  $\pi$   
 D)  $\frac{5\pi}{4}$       E)  $\frac{4\pi}{3}$

$$\int \left[ \sin \frac{t}{2} + \cos \frac{t}{2} \right]^2 dt = ?$$

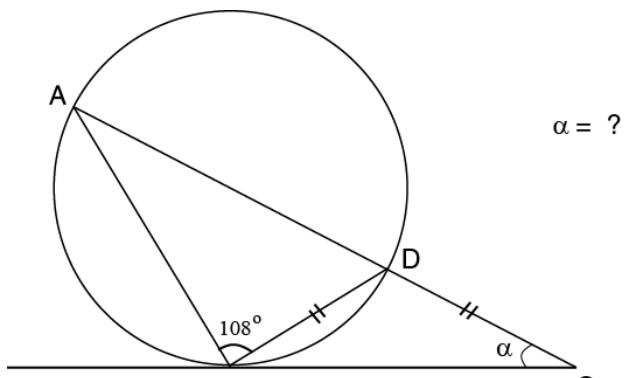
- A)  $t + \cos t + c$       B)  $t - \sin t + c$   
 C)  $t - \cos t + c$       D)  $t + \sin t + c$   
 E)  $t + \frac{\cos t}{2} + c$



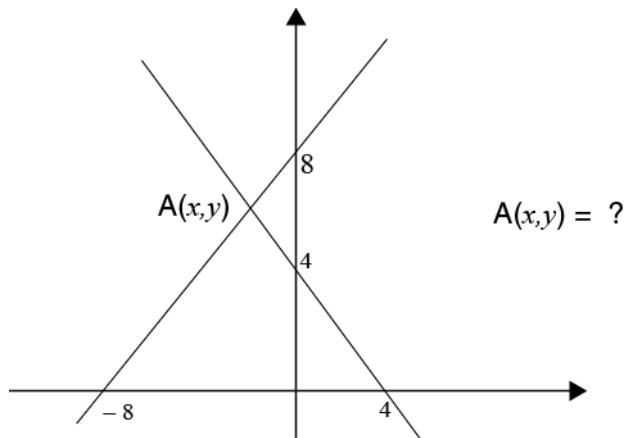
$$|AB| = |ED|, |BD| = |DC|$$

$$m(\widehat{DEC}) = ?$$

- A) 20      B) 25      C) 30      D) 45      E) 60



- A) 20      B) 22      C) 24      D) 26      E) 28



- A)  $(-2, 6)$       B)  $(-1, 6)$       C)  $(-1, 5)$   
 D)  $(-2, 5)$       E)  $(-2, 4)$