

همراه شما
در مسیر یوس

سوالات یوس دانشگاه ۱۹ مایس



Ondokuz Mayıs UNIVERSITY

INTERNATIONAL STUDENTS' EXAM

uniland.ir



۰۲۱۹۱۳۰۵۹۰۶



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A

**ONDOKUZ MAYIS UNIVERSITY
INTERNATIONAL STUDENT EXAM**

April 30, 2016

ENGLISH

NAME
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ID NUMBER
SIGNATURE	SEAT NUMBER:

IMPORTANT INFORMATION

1. This booklet includes test questions for international students who wish to study in certain Turkish universities.

The number of questions are as follows:

Mathematics	40
Basic Learning Skills	40

2. This is an "A" type booklet. Please mark the type of your booklet on the answer sheet as shown below, and make sure it has been confirmed by the exam supervisor.
If you do not code the booklet type correctly on the answer sheet, your exam will be invalid.
3. You have 120 minutes to complete the exam.

4. Each question has only one correct answer. Multiple selections will be considered as incorrect.
5. The answers to the questions given in the booklet should be marked by pencil on the answer sheet provided with this booklet. Please use a pencil. Do not fold the answer sheet and do not write anything not required on it.
6. Inappropriate markings on the answer sheet will not be read by the optical reader. The candidate is responsible for the mistakes incurred by inappropriate markings.
7. Only correct answers will be calculated in this exam. You will not lose any points for incorrect answers.
8. Further information about the examination rules are printed on the back cover of this booklet.

TYPE OF THE QUESTION BOOKLET

A <input checked="" type="radio"/>	B <input type="radio"/>	C <input type="radio"/>	D <input type="radio"/>
PARAPHR	PARAPHR	PARAPHR	PARAPHR

EXAM P L E

MATHEMATICS

1. $\frac{(1-2)\left(\frac{1}{5}+3\right)}{\frac{7}{5}-1} = ?$

- A) -8 B) -5 C) 1 D) 5 E) 8

5. $a = 0.\overline{7} = 0,777\dots 7\dots \Rightarrow \sqrt{a} = ?$

- A) $\frac{\sqrt{2}}{2}$ B) $\frac{\sqrt{3}}{2}$ C) $\frac{\sqrt{5}}{2}$
 D) $\frac{\sqrt{5}}{3}$ E) $\frac{\sqrt{7}}{3}$

3. $\begin{cases} A + 2B = 3 \\ B + C = 8 \\ 2C + D = 17 \end{cases} \Rightarrow A + D = ?$

- A) 4 B) 6 C) 7 D) 9 E) 12

6. Let x be a real number and $\sqrt{\frac{\sqrt{x}+5}{\sqrt{x}-5}} = \sqrt{x}+5$.
 What is x ?

- A) 24 B) 23 C) 26 D) 20 E) 5

7. Let x and y be positive integers. What is the sum of y 's satisfying $2x+5y=25$?

A) 4 B) 5 C) 6 D) 7 E) 8

10. $\left. \begin{array}{l} -1 \leq a \leq \frac{1}{2} \\ -2 < b \leq -\frac{1}{2} \end{array} \right\}$.

Which one of the following intervals contains a^4+b^3 ?

A) $\left[-7, \frac{1}{2} \right)$ B) $\left(-7, \frac{1}{8} \right]$ C) $\left(-8, \frac{7}{8} \right]$

D) $\left(-8, -\frac{7}{8} \right)$ E) $\left[-8, \frac{1}{8} \right]$

9. Let a be an integer. If $a+\frac{b}{a}=4$ then, which one of the following is a factor of b ?

A) $a-2$
 B) $2-a$
 C) $-(a+4)$
 D) $4+a$
 E) $4-a$

12. Which one of the following satisfies the equation $3-\frac{5}{3-x}=x+\frac{1}{x-3}$?

A) 3 B) -5 C) -1 D) 5 E) $\frac{1}{2}$

15. Let $f, g : \mathbb{R}^2 \rightarrow \mathbb{R}$, $f(x, y) = \max\left(x - y, \frac{x}{y}\right)$ and $g(x, y) = \min(x + y, xy)$ be two functions.

What is $f(f(-1, 3), g(4, 4))$?

- A) $-\frac{1}{3}$ B) $\frac{25}{3}$ C) $\frac{1}{24}$
 D) $-\frac{1}{24}$ E) $-\frac{25}{3}$

16. Let f be an even, g is an odd function and $f(2) = 1$, $g(2) = 3$.

If $h(x) = \frac{\frac{f(x)}{g(x)} - f(x)}{g(x) + f(x)}$, then

$$h(-2) = ?$$

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

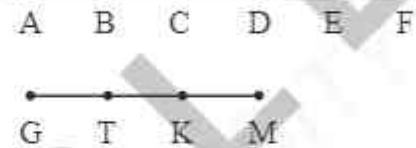
14. $\frac{5^{4x} - 2 \cdot 5^{2x+y} + 5^{2y}}{5^{2x+y} - 5^{2y}} = ?$

- A) $1 - 5^{2x+y}$ B) $1 + 5^{2x+y}$ C) $1 - 5^{y+2x}$
 D) $1 - 5^{2x-y}$ E) $5^{2x-y} - 1$

21. Let $A = 9!$. What is $11! + 10! - 9!$ in terms of A?

- A) 90.A B) 120.A C) 110.A
 D) 119.A E) 91.A

22.



How many triangles can be constructed by using the dots in the figure?

- A) 105 B) 135 C) 120
 D) 90 E) 96

19. If $\log_5 7 = a$, then what is $\log_7 35$?

- A) $\frac{a}{a+2}$ B) $\frac{a+1}{a}$ C) $\frac{a}{a+1}$
 D) $\frac{a-1}{a}$ E) $\frac{a}{a-1}$

20. What is the remainder of

$2(2015)^{22} + 3(2016)^{23} + 4(2017)^{24}$ if it's divided by 10?

- A) 0 B) 2 C) 3 D) 5 E) 7

24. Among two brothers, elder one is $7x - 10$ and younger one is $x + 13$ years old.

What is the minimum age of the elder brother?

- A) 12 B) 14 C) 16 D) 18 E) 20

27. If $\sin \alpha = \frac{4}{5}$ and $\cos \beta = \frac{6}{10}$, then what is $\sin(\alpha - \beta)$?

- A) 0 B) $\frac{3}{5}$ C) $\frac{1}{5}$ D) 1 E) $\frac{1}{2}$

25. If $f(x) = \begin{vmatrix} 3 & -2 \\ \ln e^{3x} & |3x| \end{vmatrix}$, then what is $f\left(-\frac{1}{3}\right)$?

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

26. Let $*$ be an operation on complex numbers with $Z_1 * Z_2 = Z_1 + 3|Z_1 Z_2|$.

What is $(1+i)*(\sqrt{7}-i)$?

- A) $i - 13$ B) $i + 13$ C) $13 - i$
 D) $13i + 1$ E) $13i - 1$

29. Let $f(x) = \frac{|x^3 - 8|}{x^3 - 8} + \sqrt{x-1} + \frac{1}{x^2 - 9}$

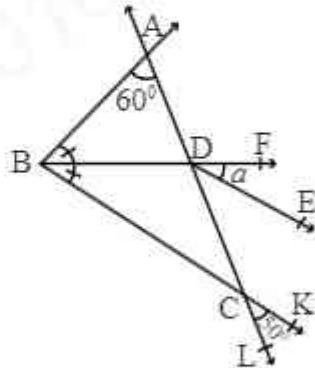
At which one of the following points $f(x)$ is continuous?

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

31. If $\int_a^b f(x)f'(x)dx = 42$ and $f(b) - f(a) = -7$,
then what is $f(a)$?

- A) $-\frac{19}{2}$ B) $-\frac{5}{2}$ C) 0
 D) $\frac{5}{3}$ E) 5

34.



$$\overleftrightarrow{DE} \parallel \overleftrightarrow{BK}$$

$$m(\widehat{BAL}) = 60^\circ$$

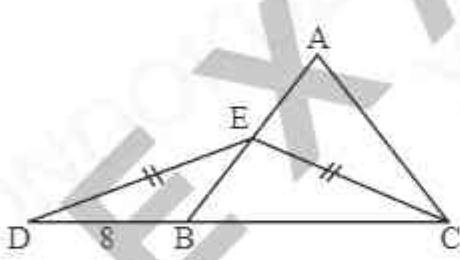
$$m(\widehat{KCL}) = 50^\circ$$

$$m(\widehat{ABD}) = m(\widehat{DBC})$$

$$m(\widehat{FDE}) = \alpha = ?$$

- A) 25 B) 35 C) 55 D) 60 E) 80

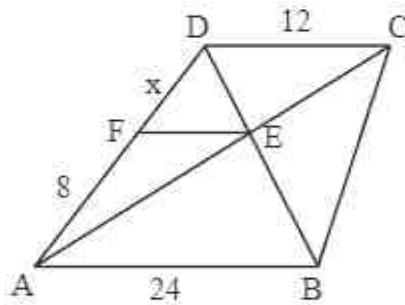
36.



ABC equilateral triangle,
D, B, C collinear points
 $|DE| = |EC|$, $|BD| = 8 \text{ cm}$
 $|AE| = ?$

- A) 8 B) 9 C) 10 D) 12 E) 13

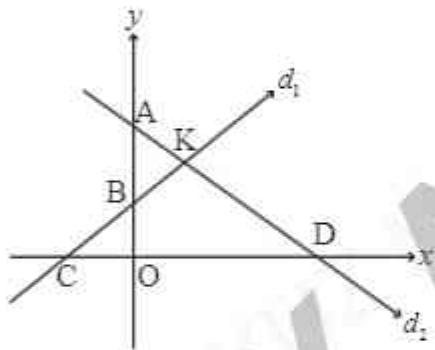
38.



ABCD trapezoid, $[DC] \parallel [AB] \parallel [FE]$
 $|DC| = 12 \text{ br}$, $|AF| = 8 \text{ br}$,
 $|AB| = 24 \text{ br}$
 $|DF| = x = ?$

- A) 3 B) 4 C) 5 D) 6 E) 7

40.



A) $(0, 4)$

B) $(0, 2)$

C) $(-2, 0)$

D) $(4, 0)$

E) $\text{Area}(KCD)=?$

A) 9

B) 16

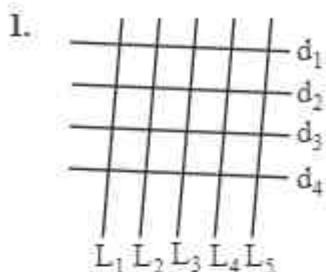
C) 18

D) 24

E) 36

Mathematics Test is completed.

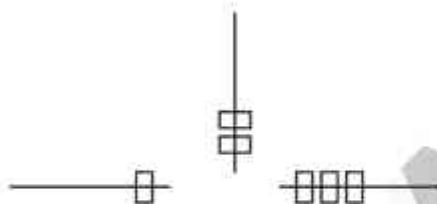
BASIC LEARNING SKILLS



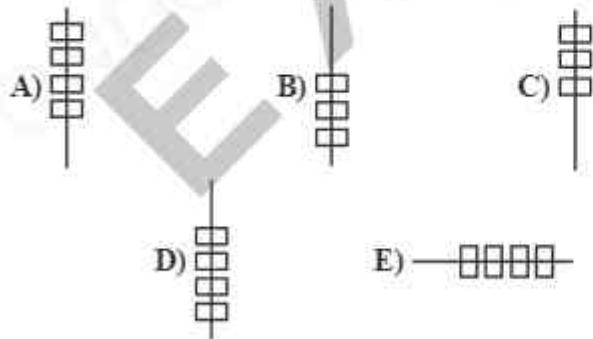
How many parallelograms are there in the above figure?

- A) 20 B) 30 C) 40 D) 50 E) 60

2.



What is the next figure in the above sequence?

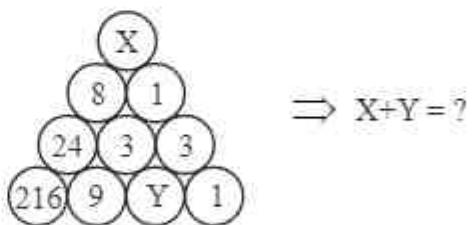


3. If 1, 5, 13, 29, A, B, then $B - A = ?$

- A) 16 B) 32 C) 64 D) 128 E) 256

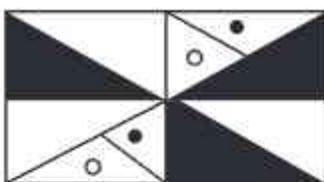
EXAMPLE

5.

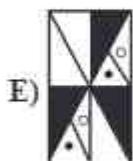
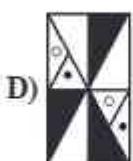
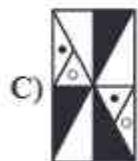


- A) 6 B) 8 C) 11 D) 13 E) 16

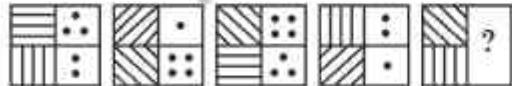
6.



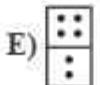
If the above figure is rotated at angle of 90° clockwise which one of the following is obtained?



7.



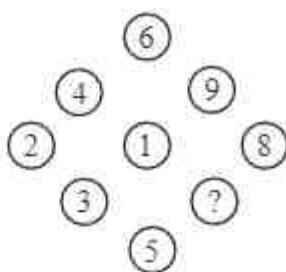
Which one of the following should be replaced in the question mark (?)?



8. If $\square \times \square = \triangle$
 $\triangle - \square = \square + \square + \square$
then $\triangle = ?$

- A) 4 B) 16 C) 28 D) 30 E) 42

14.



Which one of the following should be replaced in the question mark (?)?

- A) 5 B) 6 C) 7 D) 8 E) 9

12. $\triangle \blacksquare \blacktriangle \lozenge \rightarrow 1431$

$\lozenge \square \blacktriangle \bullet \rightarrow 1136$

$\blacksquare \square \triangle \spadesuit \rightarrow ?$

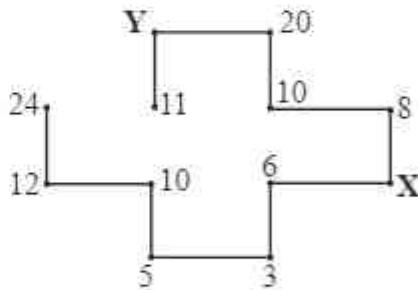
Which one of the following should be replaced in the question mark (?)?

- A) 4115 B) 3114 C) 4111

D) 1115

E) 5114

15.



$$(X, Y) = ?$$

- A) (3, 10) B) (4, 18) C) (10, 18)

D) (4, 22)

E) (18, 4)

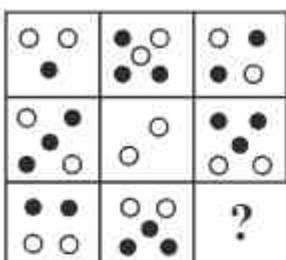
13.

5	17	34
63	79	82
21	48	?

Which one of the following should be replaced in the question mark (?)?

- A) 30 B) 33 C) 36 D) 39 E) 42

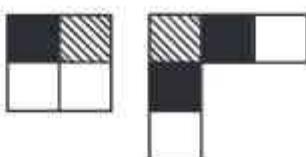
16.



Which one of the following should be replaced in the question mark (?)?

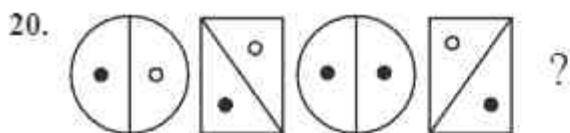
- A)
- B)
- C)
- D)
- E)

18.



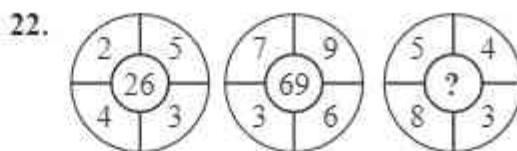
Which one of the following is obtained if two figures are merged?

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



Which one of the following should be replaced in the question mark (?)?

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



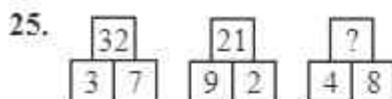
Which one of the following should be replaced in the question mark (?)?

- A) 68 B) 47 C) 36 D) 53 E) 24

24. 348269 284315 ? 8438 4811 842 86

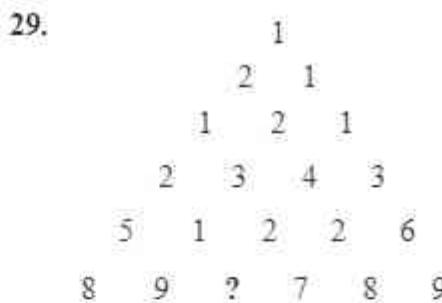
Which one of the following should be replaced in the question mark (?)?

- A) 284396
B) 28436
C) 34826
D) 34846
E) 34816



Which one of the following should be replaced in the question mark (?)?

- A) 18 B) 32 C) 48 D) 56 E) 64



Which one of the following should be replaced in the question mark (?)?

- A) 3 B) 4 C) 5 D) 6 E) 7



There are 77 equilateral black quadrangles in the above figure. What is the number of white ones?

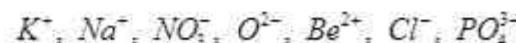
- A) 100 B) 102 C) 104
D) 106 E) 108

28. If $6+3+5=183033$
 $4+8+3=321265$
 $3+9+4=271236$

then $5+6+5=?$

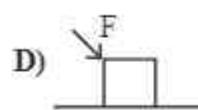
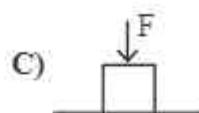
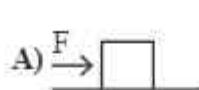
- A) 253060
B) 253006
C) 302560
D) 302506
E) 063025

31. How many of the following are anion?



- A) 1 B) 2 C) 3 D) 4 E) 5

34. A force F is acting on an object of mass m . In which one of the following the work done by the force is the biggest?



35. Which one of the following number of protons and neutrons belongs to a different element?

A) 12p, 13n

B) 12p, 10n

C) 12p, 14n

D) 12p, 11n

E) 13p, 12n

37. A potted plant and a grasshopper are put under each of the two identical bell jars. Then, one of the bell jars is kept in a dark place, the other is kept in a bright one; and the following statements are given:

- Two grasshoppers die at the same time.
- The grasshopper in the dark place lives longer.
- The grasshopper in the bright place lives longer.

Which of the above statements are correct?

- A) Only I
- B) Only II
- C) Only III
- D) I and II
- E) I and III

39.

K		L		M	
1	2	3	4	5	6

When the magnets K and M are moved towards to the magnet L, it doesn't move.

Which one at the following shows the magnet poles 1, 2, 3, 4, 5 and 6?

	1	2	3	4	5	6
A)	N	S	S	N	S	N
B)	N	N	S	S	N	S
C)	N	S	N	S	N	S
D)	S	N	S	S	S	N
E)	S	S	N	N	S	N

EXAMPLE



A

EXAMINATION RULES

1. Following materials are prohibited in exam room: Any communication equipments e.g. pagers, walkie-talkies, PDA's, watches with any other functions, weapons, notebooks, books, dictionaries, any electronic device with dictionary function, calculators, calculation charts, compasses, goniometers, rulers and etc. If any candidate enters the exam room with the prohibited materials, his/her name will be recorded and their examinations will be considered invalid.

2. Duration of the exam is 120 minutes. Candidates are allowed to take the exam if they are not late for more than 30 minutes. Candidates are not allowed to leave the exam room in the first 40 minutes and the last 5 minutes of the examination. Candidates who completed the exam or left the examination room will not be allowed to re-enter the examination room. If you complete the exam before the end of the duration you can leave the room after submitting your question booklet and answer sheet. When the end of the examination is announced you must remain seated and may not leave the examination room until all papers are collected by the invigilators.

3. Communicating with the invigilators during the examination is prohibited. Similarly, it is prohibited for the staff to talk to candidates privately. Candidates are not allowed to exchange pencils, erasers, papers etc. during the exam.

4. The exam of any candidate who cheats, attempts to cheat or assists cheating will be considered invalid and his/her identity will be recorded. Invigilators do not have to warn the students about cheating. The candidate is responsible for his/her actions. Answers of the candidates will be examined electronically. If any suspicious case is detected regarding individual or collaborate cheating, the exams of all candidates who participate in this action will be considered invalid. If invigilators report any case of misconduct in the application of the exam or collaborate cheating, OMÜ-YÖS Coordinating Office may decide to consider all of the candidates' exams invalid for that room.

5. All candidates must obey the rules in the exam room. If necessary, your seat may be changed by invigilators. Obeying the rules is of utmost importance for validation

of the exam. Identity of any candidate who engages in misconduct and does not heed the invigilator's warning to discontinue the behavior will be recorded and his/her examination will be considered invalid.

6. You must fill all the required fields on the answer sheet. Only pencils should be used for marking and writing on the answer sheet. Pens or ball point pens should not be used. All the answers should be marked on the answer sheet. Answers marked on the question booklet will be considered invalid.

7. Please check your question booklet for missing pages or typos after receiving it. If there are any missing pages or typos on your booklet, please immediately request for the change of the booklet from the head invigilator. You should also check if the booklet type written on the cover page is the same as the booklet type written on every page of the booklet. If you find any difference, please request a new booklet from the head invigilator. If you realise any difference about booklet types after you start the examination, request a new booklet of the same type you have answered. Please mark your booklet type on the "Question Booklet Type" area on the answer sheet. Booklet type you have marked will be checked by the invigilators and initialed with a pen. If the related area is not initialed, your answer sheet will not be evaluated. If there is difference between the booklet types that you have marked and the invigilator has marked, evaluation will be based on the one that is marked by invigilators.

8. Please write your name, surname and candidate number on the question booklet before starting to answer the questions. All the question booklets and answer sheets will be collected and examined at the end of the examination. In case of missing pages, examination of the related candidate will be considered invalid.

9. You can use the spaces on the question booklet for calculation.

10. Smoking (cigarettes, pipes, cigars etc.) is not allowed during the examination for both candidates and the staff.

11. Writing the questions and/or the answers and taking it out is strictly prohibited.

12. Do not forget to submit your question booklet and

همراه شما
در مسیر یوس

سوالات یوس دانشگاه ۱۹ مایس



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INTERNATIONAL STUDENTS' EXAM

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A

**ONDOKUZ MAYIS UNIVERSITY
INTERNATIONAL STUDENT EXAM**

May 22, 2021

NAME
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ID NUMBER
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A <input checked="" type="radio"/>	B <input type="radio"/>
PARAPHRASE	PARAPHRASE

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ONDOOKUZ MAYIS UNIVERSITY
YOS 2021

MATHEMATICS

1. The 30th odd number and 51st even number after 75 are the heights of Ahmet and Mehmet respectively. How tall is Mehmet from Ahmet?

A) 31 B) 33 C) 36
 D) 38 E) 41

3. Let $x, y \in \mathbb{Z}$.

How many distinct y exists satisfying the equation $|x^2 - 8x + 18| + |y - 3| = 5$?

A) 3 B) 4 C) 5
 D) 6 E) 7

2. Let a, b, c be distinct positive integers.

If $\frac{a-b}{b} > 7$, $\frac{b+c}{c} < 8$, then what is the minimum value of $a+b+c$?

A) 9 B) 12 C) 15
 D) 20 E) 27

4. Let a and b be positive integers.

If $118! + 119! = 5^a b$, then what is the maximum value of a ?

A) 23 B) 24 C) 26
 D) 27 E) 28

5. If $\frac{6}{1+c^x} + \frac{1}{1+c^{-x}} = y$, then what is

$\frac{11}{1+c^x} + \frac{1}{1+c^{-x}}$ in terms of y ?

- A) $2y - 1$ B) $2y$ C) $2y + 1$
 D) $3y$ E) $3y + 1$

6. $A = \left\{ x \in \mathbb{R} \mid \sqrt{1+x} + \sqrt{2+x} + \sqrt{3+x} = 0 \right\} = ?$

- A) \emptyset B) $\{1, 2, 3\}$ C) $\{-1, -2, -3\}$
 D) $\{-1\}$ E) \mathbb{R}

7. $\frac{2}{\sqrt[3]{25} + \sqrt[3]{5} + 1} - \frac{3}{\sqrt[3]{25} - \sqrt[3]{5} + 1} = ?$

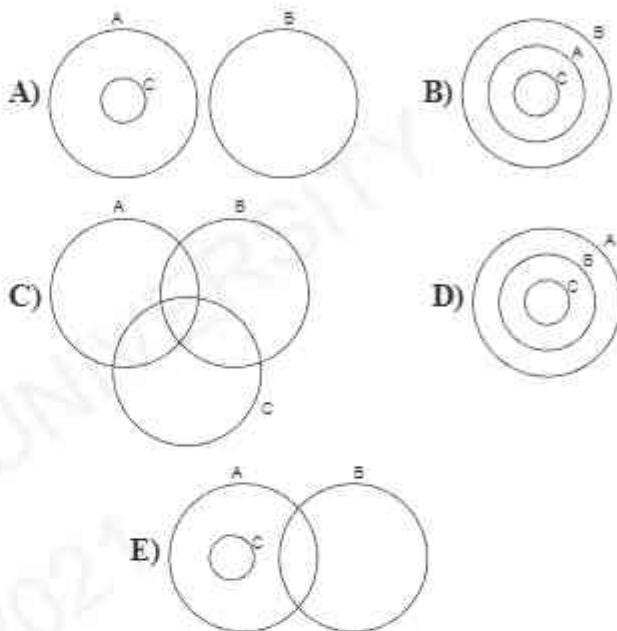
- A) -2 B) -1 C) 0
 D) 1 E) 2

8. Which one of the following is a factor of $x^4 + 3x^2 + 4$?

- A) $x^2 + 2$
 B) $x^2 - 2$
 C) $x^2 + x - 2$
 D) $x^2 - x - 2$
 E) $x^2 - x + 2$

9. If $a^3 + 3 = 0$, then what is $\frac{1}{a^2 - a + 1}$ in terms of a ?
- A) $-\frac{a+1}{2}$ B) $\frac{a-1}{3}$ C) $\frac{a-2}{2}$
 D) $\frac{a+2}{2}$ E) $a+1$

11. Which one of the following is true for
- $A = \{x \in \mathbb{R} \mid x = 2k, k \in \mathbb{Z}\}$
 $B = \{x \in \mathbb{R} \mid |1-x| + |2-x| > x+3\}$
 $C = \{x \in \mathbb{Z} \mid (0,25)^{3-x} = 4^{5-3x}\}$?



10. For which value of y , x can not be found in

- $5x - 3y + xy - 15 = 0$?
- A) -7 B) -5 C) 0
 D) 2 E) 3

12. $h(ad) = h(a) + h(d)$

$$\frac{h(a^4)}{h(\sqrt[4]{a})} = ?$$

- A) 12 B) 16 C) 20
 D) 24 E) 28

13. $h(3^{-x} + 3^x) = 9^{-x} + 9^x - 2$

$$f(x^3 + 4) = 1 - 4x$$

$$(f \circ h)(-4) = ?$$

A) -12

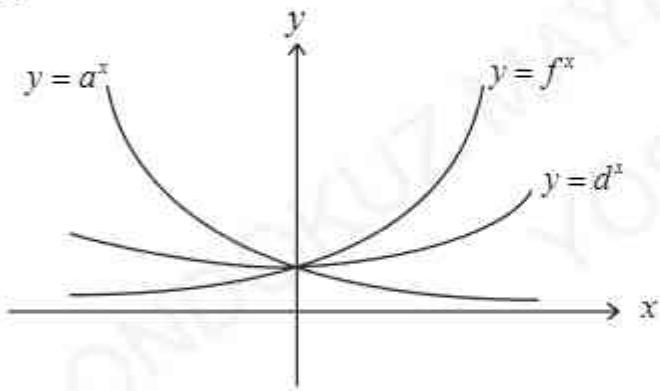
B) -9

C) -7

D) 7

E) 9

14.



What is the right order for a, d, f according to given exponential functions?

A) $f > d > a$ B) $d > a > f$ C) $a > f > d$ D) $a = f = d$ E) $a = d > f$

15. What is the sum of maximum negative integer and minimum positive integer values of x satisfying $3x + 7 \equiv 12 \pmod{29}$?

A) -17

B) -15

C) -11

D) 0

E) 13

16. If one wants to buy last floor of a building with 13 floors he/she must buy 12th floor.

How many different ways of buying 8 floors of this building?

A) 729

B) 824

C) 957

D) 1024

E) 1287

17. Efe, Mete and Ege choose one card each from a box containing cards numbered from 1 to 9 and play a game.

If the total of their card numbers is a prime, then Efe wins. It is known that card number of Efe is 3.

What is the probability for Efe to win?

- | | | |
|--------------------|--------------------|--------------------|
| A) $\frac{2}{7}$ | B) $\frac{16}{27}$ | C) $\frac{17}{28}$ |
| D) $\frac{19}{42}$ | E) $\frac{17}{56}$ | |

18. Let x_1, x_2 be the roots of

$$(4a^2 - 19a - 5)x^2 + a^2x + a + 3 = 0$$

Which one of the following is the interval for a satisfying $x_1 < 0$, $x_2 > 0$ and $|x_1| - x_2 > 0$?

- | | |
|-----------------------------------|--|
| A) $\left(-\frac{1}{4}, 5\right)$ | B) $(-\infty, -3)$ |
| C) $(5, +\infty)$ | D) $\left(-3, -\frac{1}{4}\right) \cup (5, +\infty)$ |
| E) $(0, 5)$ | |

19. For the polynomial $P(x)$ we have $P(1) > 0$, $P(2) < 0$ and $P(3) > 0$.

Which one of the following is always true?

- I. There is at least one root between 1 and 2.
 - II. There are more than one root between 2 and 3.
 - III. There are two roots between 1 and 3.
- A) Only I B) Only II C) I and II
 D) II and III E) I, II and III

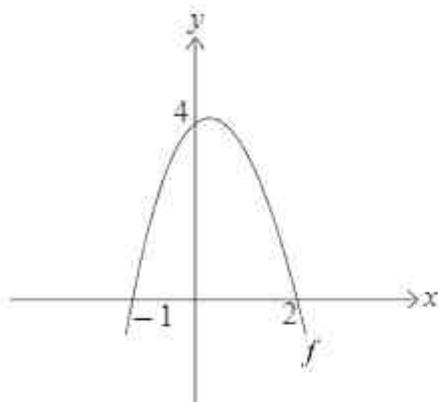
20. The roots of $2m^2 - 7m - 1 = 0$ are $\cot x$ and $\cot y$.

$$\frac{\cot x + \cot y}{1 - \tan x \tan y} = ?$$

- A) $-\frac{7}{2}$ B) $-\frac{7}{6}$ C) $\frac{2}{7}$

- D) $\frac{7}{6}$ E) $\frac{7}{2}$

21.



Above the graph of function f is given.

Which one of the following functions is continuous at $x = 5$?

I. $\frac{f(x)}{(x-2)f(x-2)}$

II. $\frac{(x-2)^2}{f^2(x)}$

III. $\frac{f(x+1)}{f(x-3)}$

- A) Only I B) Only II C) I and II
D) I and III E) All of them

22. Let $\log_5 124! = a$, $\ln b = d$.

What is $\log_5 125! + \log b^3$ in terms of a and d ?

A) $a+d$ B) $a+d+\frac{d}{\log e}$

C) $3+a+\frac{3d}{\log e}$ D) $3+a+3d \log e$

E) $a+d+3d$

23. Let $f, g : \mathbb{R} \rightarrow \mathbb{R}$ be differentiable functions

and $g'(5) \neq 0, f'(-3) = 3g'(5)$.

$$\lim_{h \rightarrow 0} \frac{f(5+h)-f(5)}{g(5+h)-g(5)} = ?$$

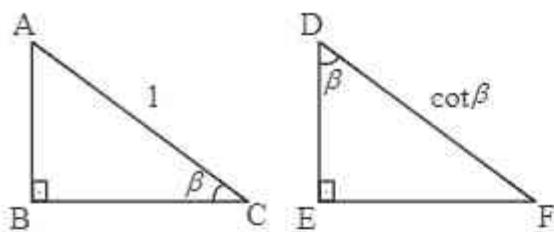
- A) $\frac{1}{3}$ B) 1 C) 3
D) 5 E) 6

24. Let $F_n + F_{n+1} = F_{n+2}$, $F_1 = F_2 = 1$ be a Fibonacci sequence.

If $a+b+c+d=1364$ and $a+d=754$ for consecutive terms a, b, c, d of this sequence, then $d=?$

- A) 34 B) 55 C) 144
D) 377 E) 610

25.



$\hat{\triangle}ABC$ and $\hat{\triangle}DEF$ are right triangles.

$$\lim_{\beta \rightarrow 0} \frac{|DF| \cdot |AB| - |EF|}{|BC|} = ?$$

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

26. The function

$$f(x) = \begin{cases} b \frac{|x-1|}{x-1} + 1, & x \in (-\infty, 1) \cup (1, 2) \\ x^2 + a, & x \in (2, +\infty) \end{cases}$$

has a limit for every $x \in \mathbb{R}$. $a + b = ?$

- A) -3 B) -2 C) -1
D) 0 E) 1

27. How many points c exist for the function

$$g(x) = \frac{-5}{(x-1)^2 (x+3)^3 (x-3)^2 (x-5)(x-4)^2},$$

where g has a limit at c but not continuous at c ?

- A) 1 B) 2 C) 3 D) 4 E) 5

telegram : @yos_books2018

28. $\cos 10^\circ \cos 20^\circ \cos 40^\circ = ?$

- A) $\frac{1}{4} \cot 10^\circ$ B) $\frac{1}{4} \tan 10^\circ$
C) $\frac{1}{8} \tan 10^\circ$ D) $\frac{1}{8} \cot 10^\circ$
E) $\frac{1}{4} \cos 10^\circ$

29. $f: \mathbb{R} \rightarrow \mathbb{R}$

$(\cos x)' = -\sin x$

$f(x) = \sqrt[3]{x-1}(1-\cos(x-1))$

$f'(1) = ?$

A) Does not exist

B) -1

C) 0

D) 1

E) 2

30. What is the product of x satisfying the equation $x^{\log_3 x} = 6561x^7$?

A) $\frac{1}{3^7}$

B) $\frac{1}{3^6}$

C) 3^6

D) 3^7

E) 3^8

31. $f(x) = \begin{cases} x+1, & x < 0 \\ x^2, & x \geq 0 \end{cases}$

$\int_1^3 f(x-2) dx = ?$

A) 0

B) $\frac{1}{12}$

C) $\frac{1}{6}$

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

E) $\frac{5}{6}$

32. Let $y = f(x)$ be a continuous function withperiod 3 and $\int_0^6 f(x) dx = 8$.

$\int_{-1}^{14} f(x) dx = ?$

A) 40

B) 20

C) 10

D) 8

E) 4

33.

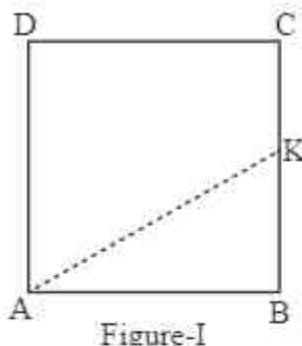


Figure-I

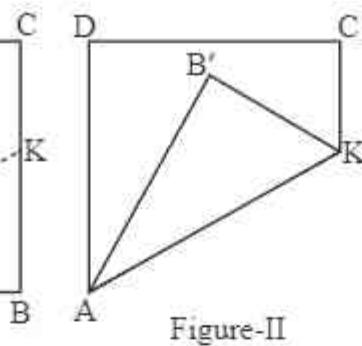


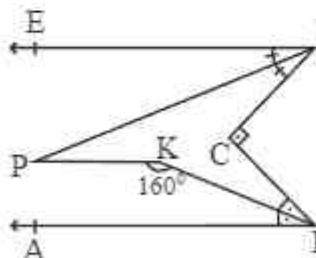
Figure-II

The vertex B of square ABCD in Figure-I changes to B' in Figure-II after folding through AK.

Which one of the following are true?

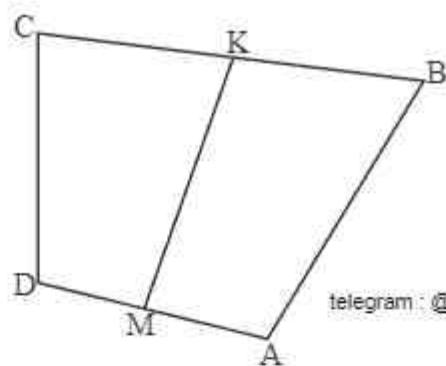
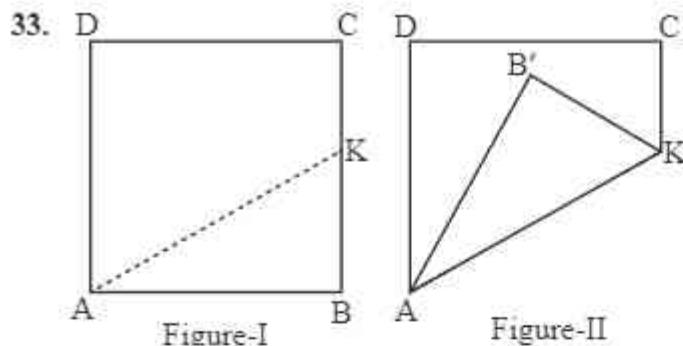
- If $0^\circ < m(\widehat{B'KC}) < 90^\circ$, then $AB'B$ is an obtuse angle triangle.
 - $m(\widehat{CKB'})$ and $m(\widehat{B'AD})$ are complementary angles.
 - If $m(\widehat{CKB'}) = 30^\circ$ and $|DC| = \sqrt{3}$ unit, then $\text{Area}(B'AD) = \frac{3\sqrt{3}}{2}$ units square.
- A) Only I B) Only III C) II and III
 D) I and II E) All of them

34.



- [BA // [DE // [PK]
 [BC] \perp [CD]
 [DP] and [BK] bisector
 $m(\widehat{PKB}) = 160^\circ$
 $m(\widehat{PDC}) = ?$

- A) 15° B) 20° C) 25°
 D) 30° E) 35°



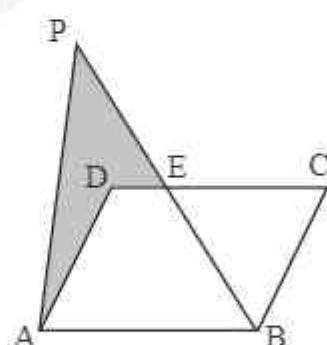
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ABCD is a quadrangle,
 $|CK| = |KB|$, $|DM| = |MA|$
 $|DC| = 12$ units, $|AB| = 22$ units, $|MK| = x$

How many distinct integers x are there?

- A) 8 B) 9 C) 10
 D) 11 E) 12

36.



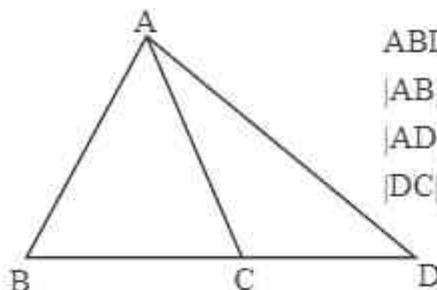
ABCD is a parallelogram,

$$\text{Area}(\triangle ADE) = \text{Area}(\triangle BEC)$$

$$\frac{|PE|}{|EB|} = ?$$

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

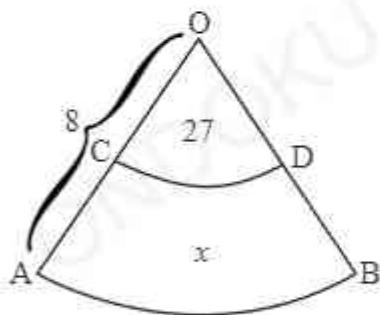
37.



ABD is a triangle,
 $|AB|=|AC|=5$ units
 $|AD|=7$ units
 $|DC||DB|=?$

- A) 12 B) 16 C) 20
 D) 24 E) 28

38.



In the circle segments with center O,

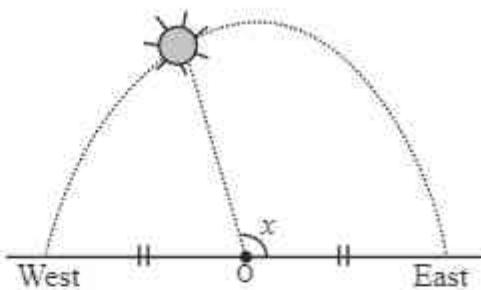
$$|OD|=3 \text{ units}, |OA|=8 \text{ units}$$

$$\text{Area}(OCD)=27 \text{ units square.}$$

$$\text{Area}(ABDC)=x=?$$

- A) 105 B) 135 C) 165
 D) 195 E) 225

39.



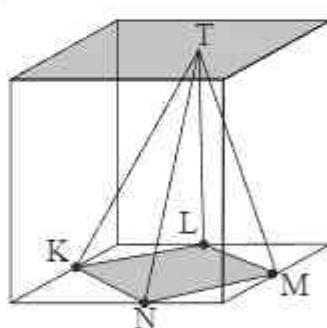
It is known that sun rises at 7.30 and sunsets at 22.30.

Sun follows a trace of half circle.

According to the position of sun at 15.30,
 what is $x = ?$

- A) 92° B) 96° C) 108°
 D) 124° E) 144°

40.



K, L, M, N are the midpoints of base edges of the quadrangular and T is a point on the floor.

What is the ratio of the volume of the pyramid (T, KNML) to the volume of the quadrangular?

- A) $\frac{1}{6}$ B) $\frac{1}{3}$ C) $\frac{1}{2}$
 D) 2 E) 6

Mathematics Test is completed.

BASIC LEARNING SKILLS

1.	ab	<table border="1"> <tr> <td>24</td><td>25</td><td>82</td><td>72</td></tr> <tr> <td>61</td><td>23</td><td>46</td><td>X</td></tr> </table>	24	25	82	72	61	23	46	X
24	25	82	72							
61	23	46	X							
	cd									

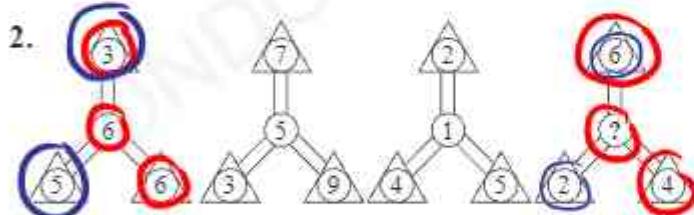
X=?

- A) 25 B) 80 C) 86
 D) 92 E) 94

$$ab = dc$$

$$\sqrt{=} \rightarrow n = \sqrt{}$$

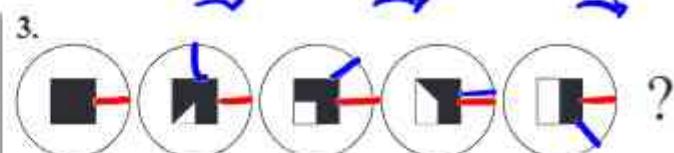
$$3 \times 5 = 3 + 6 + 6$$



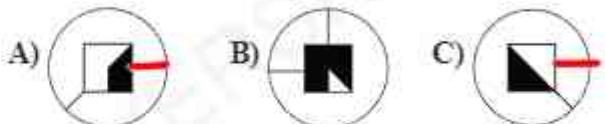
Which one of the following should be replaced in the question mark (?)?

- A) 2 B) 3 C) 4 D) 5 E) 6

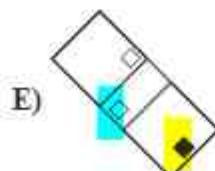
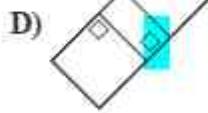
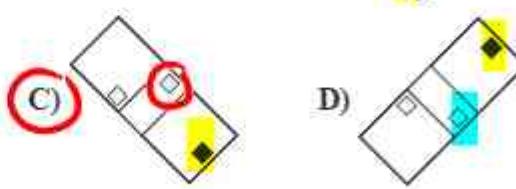
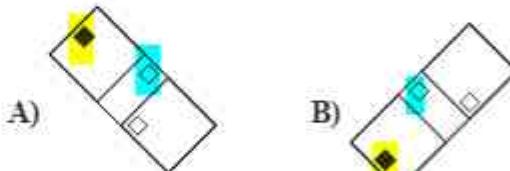
$$6 + ? + 4 = 6 \times 2 \rightarrow ? = 2$$

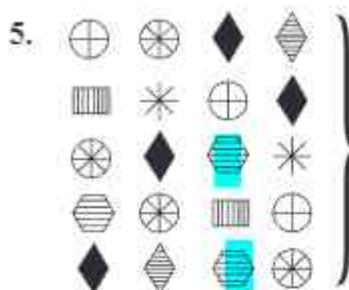


Which one of the following should be replaced in the question mark (?)?



4. Which is the odd one out?





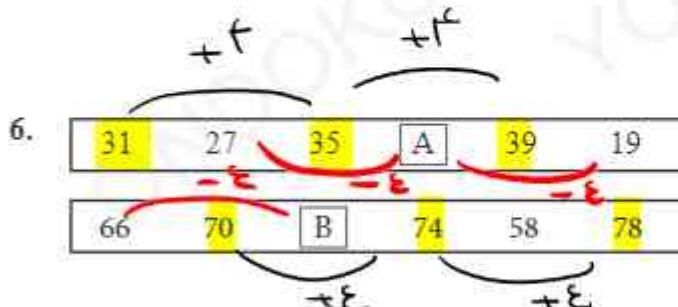
9372 7825
3598 2356
5693

Each figure corresponds to a digit. Which one of the following corresponds to $\begin{array}{c} \diamond \\ \oplus \\ \otimes \\ \bowtie \end{array}$?

- A) 6957 B) 6892 C) 6325
D) 6278 E) 6239

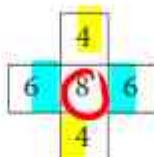
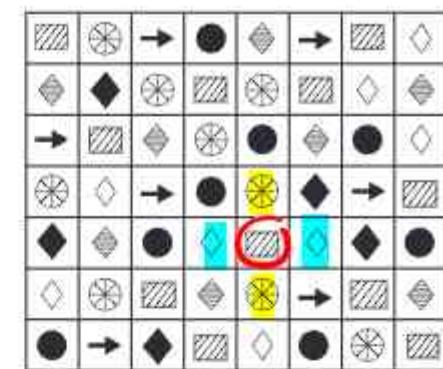
B. 62

A = 15



Which one of the following should replaced A and B, respectively?

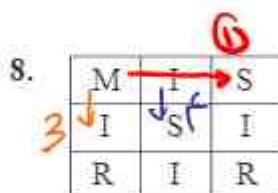
- A) (47, 62) B) (62, 23) C) (47, 67)
D) (23, 62) E) (23, 78)



Each digit denotes a distinct symbol.

Which one of the following corresponds 8 according to given piece?

- A) → B) ■■■ C) ●
D) ♦ E) ◇

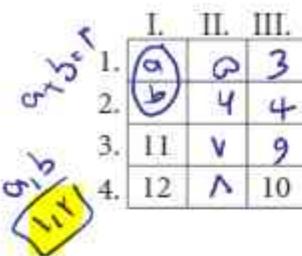


$$3 + 4 - 1 = 6$$

How many MISIR can be written, moving only right, left, up, down?

- A) 6 B) 7 C) 8 D) 9 E) 10

Solve questions 9-10 according to explanation below.



Numbers from 1 to 9 are placed in the empty boxes such that the sum of columns (I, II, III) are equal.

9. Which one of the following may not be on the same row with 3?

- A) 9 B) 8 C) 7 D) 6 E) 4

$$1+2+\dots+12 = \frac{12 \times 13}{2} = 6 \times 13$$

مربع مكعب $\frac{6 \times 13}{3} = 26$

لهم \leftarrow

الآن سمعناه \rightarrow طرفة

أنا \leftarrow
أنا \leftarrow
أنا \leftarrow

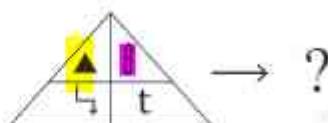
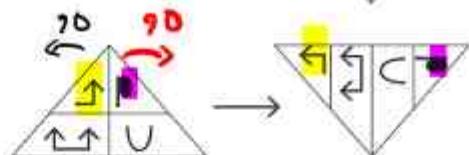
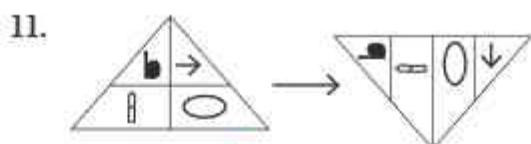
10. Which one of the following can not be the sum of the first row of the next figure?

a	b	c
18	14	14
11	6	2
12	10	

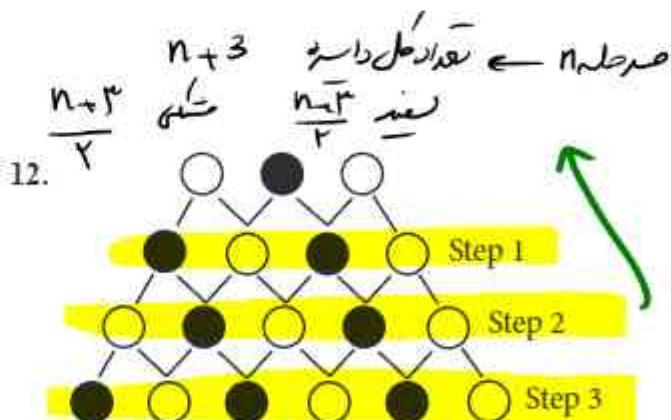
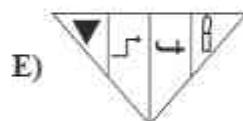
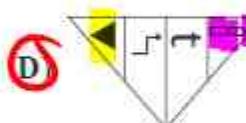
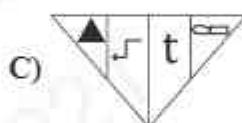
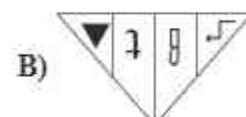
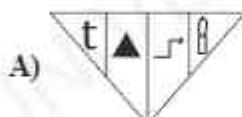
- A) 20 B) 19 C) 18 D) 17 E) 16

if $a=1$ $\frac{b}{b}$ $\frac{c}{c}$ $a+b+c = 16$

$\therefore a=v$ $\frac{b}{b}$ $\frac{c}{c}$ $a+b+c = 18$



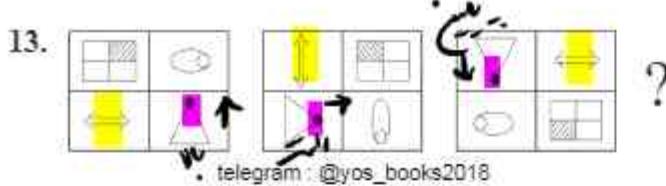
Which one of the following should be replaced in the question mark (?)?



How many ● are there at step 19?

- A) 10 B) 11 C) 12 D) 13 E) 14

مربع $\frac{19+3}{2} = 11$



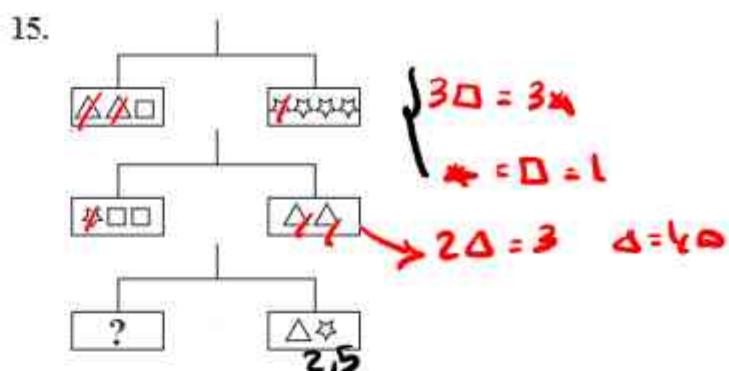
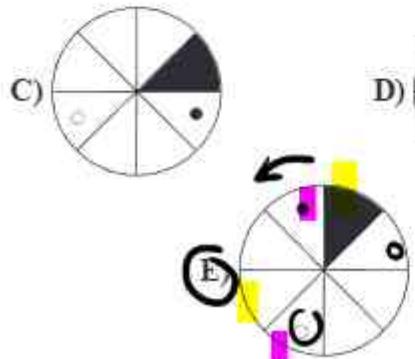
Which one of the following should be replaced in the question mark (?)?

- A) B) C) D) E)



Which one of the following is rotated at an angle of 255° clockwise yields the above figure?

- A) B) C) D)



Which one of the following should be replaced in the question mark (?)?

- A) B) C) D) E)

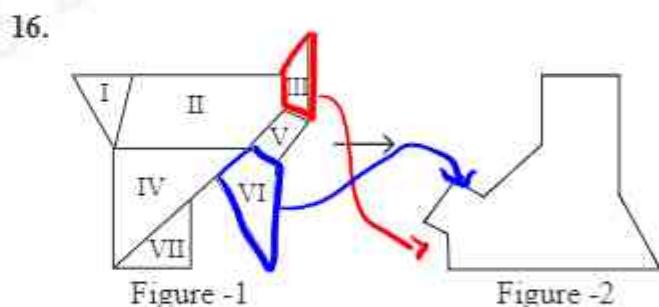
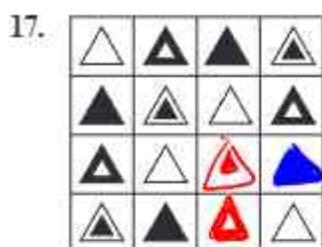


Figure 2 is obtained by deleting two parts from Figure 1. What are they?

- A) I and III B) I and VII C) III and V
 D) E) I and V



↙ ↘ ↗ ↙

Which one of the following is the missing part?

- A) B) C)
 D) E)



Which one of the following should be replaced in the question mark (?)?

- A) B) C)
 D) E)

$\Delta \div 2$ $\Delta \times \frac{1}{2}$

$$18. \quad \begin{array}{c} 28 \\ 16 \\ 20 \end{array} = \begin{array}{c} 15 \\ 2 \\ 14 \\ 16 \end{array}$$

$\circ \rightarrow$

$$\begin{array}{c} 32 \\ 28 \\ 20 \\ 8 \end{array} = 16$$

$$A) \quad \begin{array}{c} 8 \\ 5 \\ 16 \\ 21 \end{array}$$

$$B) \quad \begin{array}{c} 16 \\ 14 \\ 4 \\ 5 \end{array}$$

$$C) \quad \begin{array}{c} 15 \\ 8 \\ 2 \\ 14 \end{array}$$

$$D) \quad \begin{array}{c} 2 \\ 16 \\ 21 \\ 8 \end{array}$$

$$E) \quad \begin{array}{c} 5 \\ 4 \\ 8 \\ 14 \end{array}$$

$$20. \quad \begin{array}{c} \text{Pentagon} \\ \text{Triangle} \end{array} \rightarrow 259$$

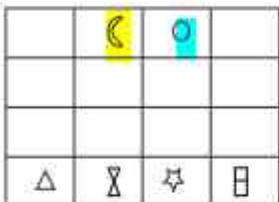
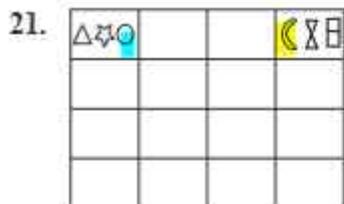
$$\begin{array}{c} \text{Hexagon} \\ \text{Square} \end{array} \rightarrow 3616$$

$$\begin{array}{c} \text{Triangle} \\ \text{Octagon} \end{array} \rightarrow 964$$

$$\begin{array}{c} \text{Square} \\ \text{Triangle} \end{array} \rightarrow ? \quad (E^r | T^r) = 169$$

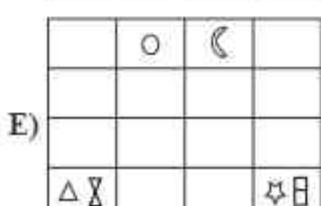
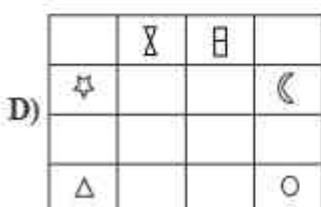
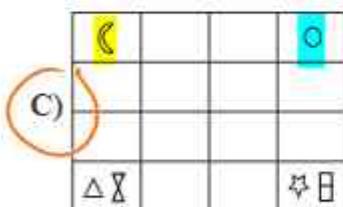
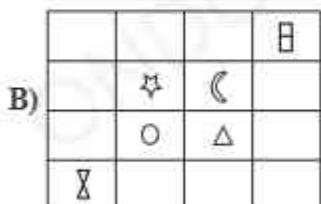
Which one of the following should be replaced in the question mark (?)?

- A) 169 B) 1625 C) 1816
 D) 2512 E) 9636



?

Which one of the following should be replaced in the question mark (?)?

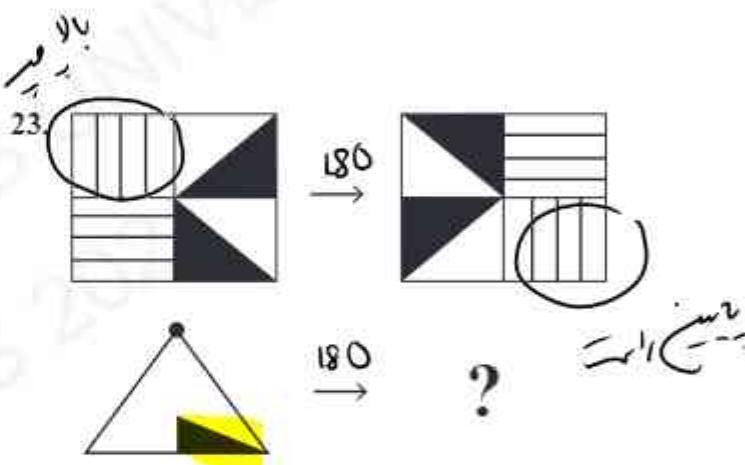


22. SAASFRFTAASRRFTTRRAFSASAASRS
FASTRFRTATSTSSFARSTTF

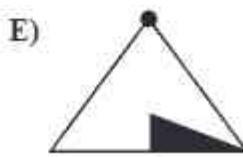
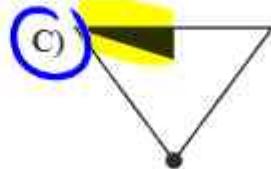
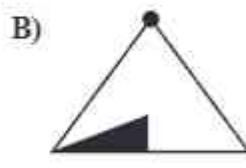
Which letter is the most appearing one in the above letter group?

- A) A B) F C) R D) S E) T

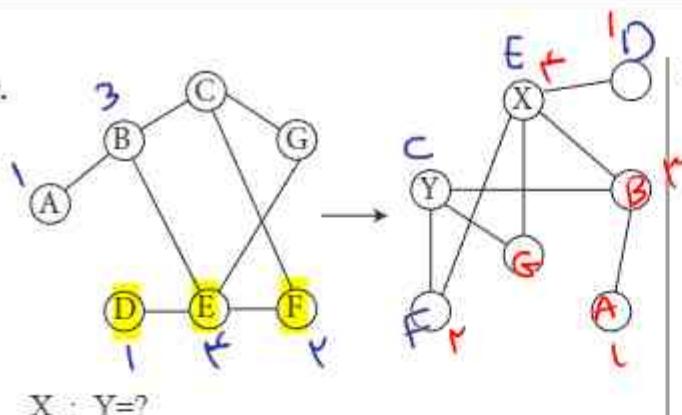
عهار ساچه سانه ایست؟



Which one of the following should be replaced in the question mark (?)?

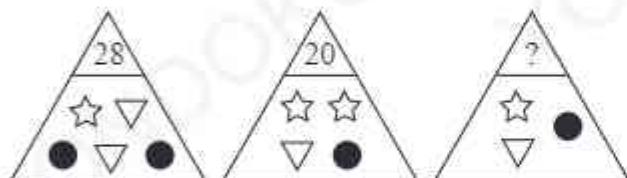


29.

 $X : Y = ?$

- A) E ; C B) A ; B C) D ; E
D) A ; G E) E ; F

30.



There is a relation between the above numbers and figures. Which one of the following should be replaced in the question mark (?)?

- A) 18 B) 16 C) 15
D) 14 E) 12

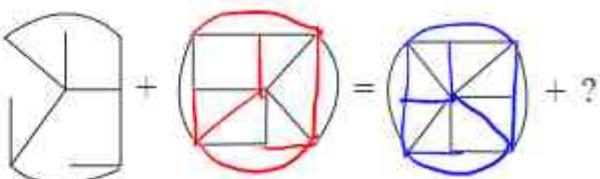
$$\text{I} \quad \star + \nabla + 20 + \star = 28$$

$$\text{II} \quad 2\star + \nabla + 0 = ?$$

$$\text{I} + \text{II} \quad 3\star + 3\nabla + 30 = 58$$

$$\star + \nabla + 0 = \frac{58}{3}$$

31.



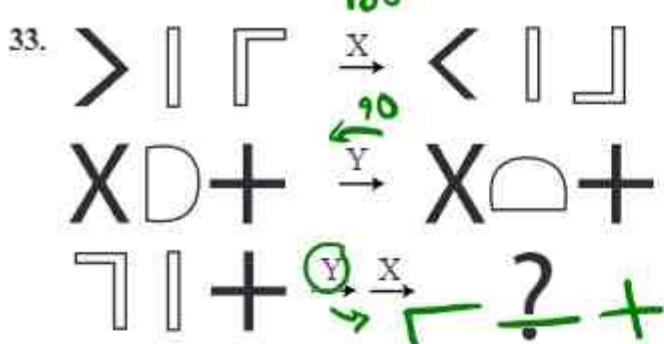
Which one of the following should be replaced in the question mark (?)?

- A)
B)
C)
D)
E)

$$38 - 35 - 15 - 31 - 28 - 15 - 24 - ? - ? = 10$$

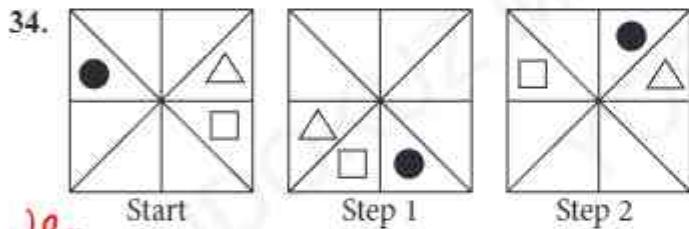
Which one of the following should replace the question marks (?) - (?)?

- A) 20 - 17 B) 21 - 15 C) 21 - 18
D) 15 - 20 E) 20 - 15



Which one of the following should be replaced in the question mark (?)?

- A) ∟ | + B) ∟ — +
 C) ∟ — + D) ∟ | +
 E) L | +



Which one of the following is step 3?

- A)
 B)
 C)
 D)
 E)

35.

I	II	III
11	10	S
10	12	12
7 4 3	8 2 4	3 U 9
28	16	15
21	32	K

$\sqrt{+} \leftarrow$
 $\sqrt{+} \leftarrow$
 $\sqrt{+} \leftarrow$
 $\sqrt{+} \leftarrow$

What is S + U + K according to the rule for I and II?

- A) 50 B) 40 C) 30
 D) 20 E) 10

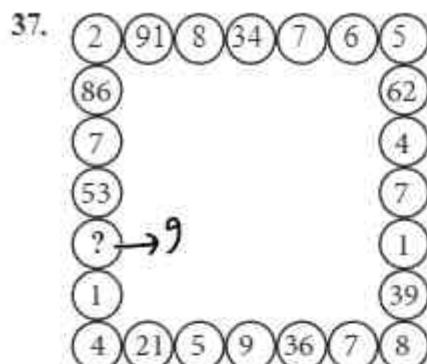
$$3 \times 4 = 12 \quad u = 0$$

$$3 \times 9 = k = 18$$

$$3 + u = s = 8$$

36. Which is the odd one out?

- A) B)
 C) D)
 E)



Which one of the following should be replaced in the question mark (?)?

- A) 3 B) 5 C) 9
D) 17 E) 88

مکانیکی ایجاد کردن



Which number is the car parked?

- A) 687 B) 789 C) 896
D) 900 E) 988

687

39.

9×9	\rightarrow	9
13×13	\rightarrow	16
17×17	\rightarrow	19
21×21	\rightarrow	?

$13 \times 13 = 169$

$6 + 9 + 1 = 16 \checkmark$

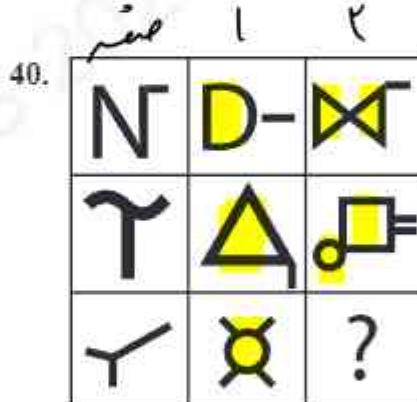
Which one of the following should be replaced in the question mark (?)?

- A) 27 B) 24 C) 18

- D) 9 E) 8

$21 \times 21 = 441$

$6 + 9 + 1 = 16 \checkmark$



Which one of the following should be replaced in the question mark (?)?

- A)
B)
C)



ONDOKUZ MAYIS UNIVERSITY
YÖS 2021



A

EXAMINATION RULES

1. Following materials are prohibited in exam room: Mobile phones and any communication equipments e.g. pagers, walkie-talkies, PDA's, watches with any other functions, weapons, notebooks, books, dictionaries, any electronic device with dictionary function, calculators, calculation charts, compasses, goniometers, rulers and etc. If any candidate enters the exam room with the prohibited materials, his/her name will be recorded and their examinations will be considered invalid.
2. Duration of the exam is 120 minutes. Candidates are allowed to take the exam if they are not late for more than 30 minutes. Candidates are not allowed to leave the exam room in the first 60 minutes and the last 5 minutes of the examination. Candidates who completed the exam or left the examination room will not be allowed to re-enter the examination room. If you complete the exam before the end of the duration you can leave the room after submitting your question booklet and answer sheet. When the end of the examination is announced you must remain seated and may not leave the examination room until all papers are collected by the invigilators.
3. Communicating with the invigilators during the examination is prohibited. Similarly, it is prohibited for the staff to talk to candidates privately. Candidates are not allowed to exchange pencils, erasers, papers etc. during the exam.
4. The exam of any candidate who cheats, attempts to cheat or assists cheating will be considered invalid and his/her identity will be recorded. Invigilators do not have to warn the students about cheating. The candidate is responsible for his/her actions. Answers of the candidates will be examined electronically. If any suspicious case is detected regarding individual or collaborate cheating, the exams of all candidates who participate in this action will be considered invalid. If invigilators report any case of misconduct in the application of the exam or collaborate cheating, OMÜ-YOS Coordinating Office may decide to consider all of the candidates' exams invalid for that room.
5. All candidates must obey the rules in the exam room. If necessary, your seat may be changed by invigilators. Obeying the rules is of utmost importance for validation of the exam. Identity of any candidate who engages in misconduct and does not heed the invigilator's warning will be recorded and his/her

- examination will be considered invalid.
6. You must fill all the required fields on the answer sheet. Only pencils should be used for marking and writing on the answer sheet. Pens or ball point pens should not be used. All the answers should be marked on the answer sheet. Answers marked on the question booklet will be considered invalid.
7. Please check your question booklet for missing pages or typos after receiving it. If there are any missing pages or typos on your booklet, please immediately request for the change of the booklet from the head invigilator. You should also check if the booklet type written on the cover page is the same as the booklet type written on every page of the booklet. If you find any difference, please request a new booklet from the head invigilator. If you realise any difference about booklet types after you start the examination, request a new booklet of the same type you have answered. Please mark your booklet type on the "Question Booklet Type" area on the answer sheet. Booklet type you have marked will be checked by the invigilators and initialed with a pen. If the related area is not initialed, your answer sheet will not be evaluated. If there is difference between the booklet types that you have marked and the invigilator has marked, evaluation will be based on the one that is marked by invigilators.
8. Please write your name, surname and candidate number on the question booklet before starting to answer the questions. All the question booklets and answer sheets will be collected and examined at the end of the examination. In case of missing pages, examination of the related candidate will be considered invalid.
9. You can use the spaces on the question booklet for calculation.
10. Smoking (cigarettes, pipes, cigars etc.) is not allowed during the examination for both candidates and the staff.
11. Writing the questions and/or the answers and taking it out is strictly prohibited.
12. Do not forget to submit your question booklet and answer sheet before leaving the exam room.

همراه شما
در مسیر یوس

سوالات یوس دانشگاه ۱۹ مایس



Ondokuz Mayıs UNIVERSITY

INTERNATIONAL STUDENTS' EXAM

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A

**ONDOKUZ MAYIS ÜNİVERSİTESİ
YÖS SINAVI
18 Mayıs 2013**

ADI
SOYADI
ADAY NUMARASI
İMZA	SIRA NO:

GENEL AÇIKLAMA

1. Bu soru kitabı *Türkiye'deki belirli üniversitelerde öğrenim görmek isteyen uluslararası öğrencileri* seçme amacıyla hazırlanmış soruları içermektedir.

Bu testlerin soru adetleri şöyledir:

- | | |
|-----------------------------|----|
| 1. Matematik | 40 |
| 2. Temel Öğrenme Becerileri | 40 |
2. Bu soru kitabıının türü A'dır. Bunu cevap kağıdınızda ilgili yere aşağıda gösterilen şekilde aynen kodlayınız ve salon görevlisinin de ilgili yere kodladığınız bilgiyi onaylamasını sağlayınız.
Bu kodlamayı cevap kağıdınıza yapmadığınız veya yanlış yaptığınız takdirde, sınavınızın değerlendirilmesi mümkün değildir.
3. Sınavda adaylara toplam 120 dakika süre verilmiştir.
4. Cevaplama istediğiniz bölümden başlayabilirsiniz.
5. Test kitabındaki her sorunun yalnızca bir doğru cevabı vardır. Bir soru için birden fazla cevap yeri

- İşaretlenmişse o soru yanlış cevaplanmış sayılacaktır.
6. Bu kitabıktaki soruların cevapları, kitabıyla birlikte verilen cevap kağıdında ayrılan yerlere kurşun kalemlle işaretlenecektir. Cevap Kağıdı buruşturulmayacak, üzerinde gereksiz hiçbir işaret konulmayacaktır.
7. Cevap kağıdında soruların cevapları doğru biçimde işaretlenmediğinde optik okuyucu cevabı algılayamayacaktır. Yanlış işaretlemelerden kaynaklanan hatalardan tamamen aday sorumludur.
8. Bu sınavın değerlendirilmesi doğru cevap sayısı üzerinden yapılacak, yanlış cevaplar dikkate alınmayacağından emindi. Bu nedenle, her soruda size en doğru görünen cevabı işaretleyerek cevapsız soru bırakmamanız yararınıza olacaktır.
9. Sınavda uyulacak diğer kurallar bu kitabıın arkada belirtilemiştir.

SORU KİTAPÇIĞI TÜRÜ	
A ●	B ○
Paraf	Paraf

Bu testlerin her hakkı saklıdır. Hangi amaçla olursa olsun, testlerin tamamının veya bir kısmının OMÜ'nün yazılı izni olmadan kopya edilmesi, fotoğrafının çekilmesi, herhangi bir yolla çoğaltılması, yayınlanması ya da kullanılması yasaktır. Bu yasağa uymayanlar, gerekli cezai sorumluluğu ve testlerin hazırlanmasındaki mali külleti peşinen kabullenmiş sayılır.

MATEMATİK

1. $\frac{5^{-1} \cdot \left(\frac{1}{5} - 1\right)}{(-2^{-2}) \left(2 - \frac{1}{2}\right)} = ?$

- A) $-\frac{2}{3}$ B) $-\frac{1}{24}$ C) $\frac{1}{24}$
 D) $\frac{2}{3}$ E) $\frac{3}{2}$

3. $\frac{1}{\frac{0,1}{0,11} + \frac{0,3}{0,33} - \frac{0,6}{0,66}} = ?$

- A) 1,1 B) 1,11 C) 10 D) 11 E) 33

4. $\frac{4}{0,2} - (0,25)^{-2} + 1 = ?$

- A) 0,2 B) 0,5 C) 1 D) 4 E) 5

2. $\frac{1}{\frac{2}{3}} - \frac{1}{\frac{2}{3}} = ?$

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

5. $\frac{a}{\frac{b}{2}} \quad \frac{b}{\frac{c}{4}} \quad \frac{a}{\frac{m}{k}} = ? \quad k = ?$

- A) 6 B) 8 C) 11 D) 13 E) 14

6. $a = 3,45$

$$b = (3-a) \frac{5}{41}$$

$$b = ?$$

- A) $-\frac{1}{12}$ B) $-\frac{1}{18}$ C) $-\frac{1}{41}$

- D) $\frac{1}{18}$ E) $\frac{1}{12}$

7. $x+y+z=4$
 $xy+xz=4$ $x=?$

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

8. $\frac{1}{a} + \frac{1}{b} = 15$

$$\frac{1}{b} + \frac{1}{c} = 17 \quad , \quad c = ?$$

$$\frac{1}{a} + \frac{1}{c} = 12$$

- A) $\frac{1}{13}$ B) $\frac{1}{10}$ C) $\frac{1}{7}$

- D) $\frac{1}{6}$ E) $\frac{1}{5}$

9. $\frac{a-1}{a+2} = \frac{a-3}{a+1} \quad , \quad a=?$

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

10. $\frac{\sqrt{21}-\sqrt{15}+\sqrt{10}-\sqrt{14}}{\sqrt{7}-\sqrt{5}} (\sqrt{3}+\sqrt{2}) = ?$

- A) 1 B) $\sqrt{6}$ C) 3 D) 5 E) $5+2\sqrt{6}$

13. $\frac{2^{2x+2}-2^4}{2^x+2} \cdot \frac{2^x-2}{8} - 1 = ?$

- A) 30 B) 31 C) 32 D) 33 E) 34

11. $\sqrt{0,1} (\sqrt{3,6} + \sqrt{1,6}) = ?$

- A) 0,1 B) $\sqrt{0,52}$ C) 1 D) $\sqrt{10}$ E) 10

14. $xy > 0$ ve $x^2y < 0$

$$\frac{|x|-|x+y|-1}{1-y} = ?$$

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

12. $x = 3^{n+2}$: $3x = 9^{n+3}$: $n = ?$

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

15. $(xy)_7 = (yx)_9$

$$x+y = ?$$

- A) 4 B) 5 C) 7 D) 11 E) 12

16. $f: \mathbb{R} \rightarrow \mathbb{R}$, $g: \mathbb{R} \rightarrow \mathbb{R}$,

$$f(1-x) = x+3, \quad g\left(\frac{x}{2}+1\right) = 2x-1$$

$$(f \circ g)(1) = ?$$

- A) -5 B) -4 C) 3 D) 4 E) 5

18. $f: \mathbb{R} \setminus \left\{\frac{7}{5}\right\} \rightarrow \mathbb{R} \setminus \left\{\frac{3}{5}\right\} \Rightarrow$

$$5xf'(x)+2=3x+7f(x)$$

$$f^{-1}(5)=?$$

- A) $\frac{1}{3}$ B) $\frac{1}{2}$ C) $\frac{3}{5}$

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

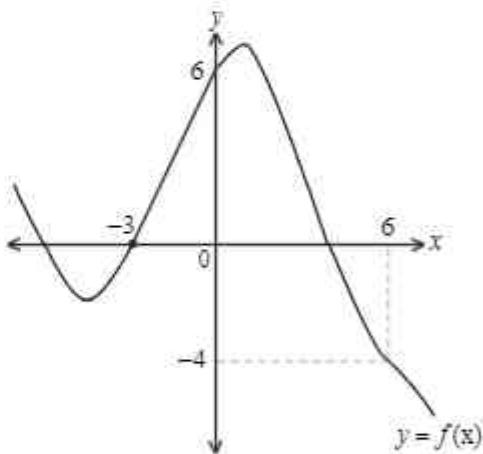
17. $f(x-3) = 5f(x-2)$

$$f(2) = 5$$

$$f(11) = ?$$

- A) 5^{-2} B) 5^{-4} C) 5^{-7} D) 5^{-8} E) 5^{-9}

19.



$$(f \circ f \circ f)(-3) = ?$$

- A) -4 B) -3 C) 0 D) 4 E) 6

20. $2\ln x - \ln y = 1$
 $\ln(xy) = 2$
 $x + y = ?$

- A) e B) $2e$ C) $e+2$ D) e^{-1} E) $4e$

23. $\frac{\tan x - \sin x}{1 - \sec x} = ?$

- A) $-\sin x$ B) $-\cos x$ C) $\cos x$
 D) $\sin x$ E) $\tan x$

21. $\log_3(81 \log_x 64) = 5$
 $x = ?$

- A) 2 B) 3 C) 4 D) 5 E) 6

24. $\lim_{x \rightarrow 2} \frac{\sqrt{2x} - 2}{x - 2} = ?$

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

22. $z \in \mathbb{C}, z = -1 + i\sqrt{7}$
 $z\bar{z} = ?$

- A) 4 B) 5 C) 6 D) 7 E) 8

25. $\lim_{x \rightarrow \infty} \frac{8x^2 - 3x + 4}{2x^2 - x + 1} = ?$

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

26. $\lim_{x \rightarrow 3} \frac{9-x^2}{\tan(3-x)} = ?$

- A) -6 B) -3 C) 0 D) 3 E) 6

29. $f(3x-2) = 5x^2 + 3x^2 + 7$
 $f'(4) = ?$

- A) 24 B) 16 C) 0 D) -16 E) -24

27. $f(x) = (x^2 + 2)(x^2 - 2x)$
 $f'(-1) = ?$

- A) -9 B) -4 C) 1 D) 4 E) 5

30. $f'(x) = 2x + 1$
 $f(1) = 4$
 $f(2) = ?$

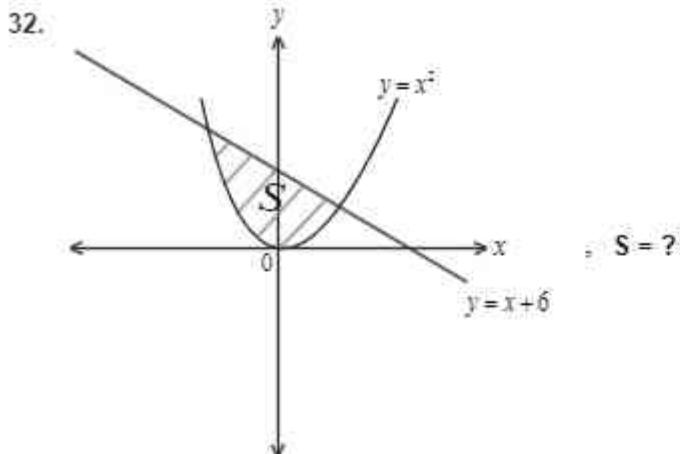
- A) 2 B) 4 C) 6 D) 8 E) 10

28. $f(x) = \sin^2 4x$
 $\lim_{h \rightarrow 0} \frac{f\left(\frac{\pi}{16} + h\right) - f\left(\frac{\pi}{16}\right)}{h} = ?$

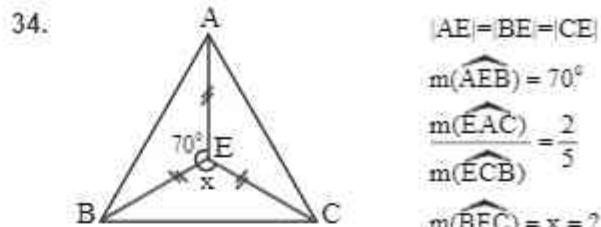
- A) 1 B) 2 C) $2\sqrt{2}$ D) 4 E) $4\sqrt{2}$

31. $\int_0^{\frac{\pi}{4}} \frac{\cos 2x}{1 + \sin^2 2x} dx = ?$

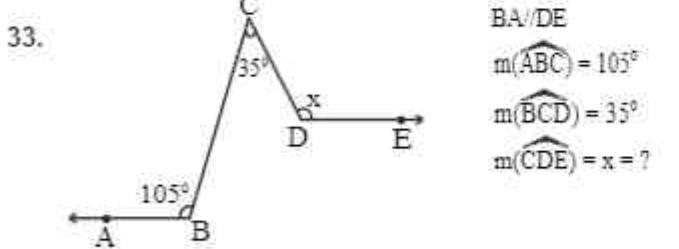
- A) $\frac{\pi}{4}$ B) $\frac{\pi}{8}$ C) 0
 D) $-\frac{\pi}{8}$ E) $-\frac{\pi}{4}$



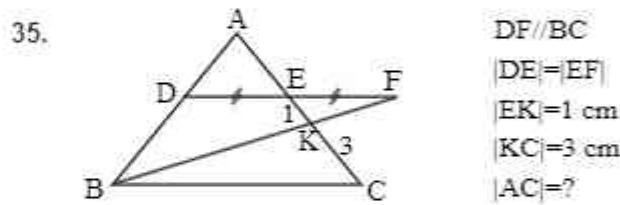
- A) $\frac{80}{7}$ B) $\frac{100}{7}$ C) $\frac{120}{7}$
 D) $\frac{123}{6}$ E) $\frac{125}{6}$



- A) 130 B) 125 C) 120
 D) 110 E) 100

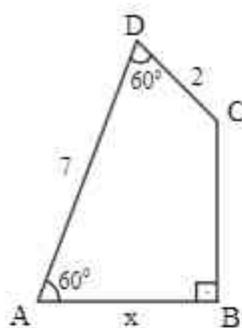


- A) 80 B) 95 C) 100 D) 110 E) 115



- A) 5 B) $\frac{11}{2}$ C) 6
 D) $\frac{13}{2}$ E) 7

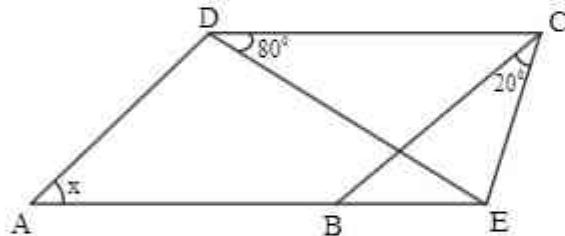
36.



- $CB \perp AB$
 $m(\widehat{ADC}) = m(\widehat{DAB}) = 60^\circ$
 $|DC| = 2 \text{ cm}$
 $|AD| = 7 \text{ cm}$
 $|AB| = x = ?$

- A) $\frac{7}{2}$ B) 4 C) $\frac{9}{2}$
 D) 5 E) $\frac{11}{2}$

37.

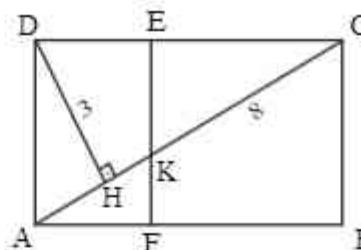


ABCD paralelkenar

- $|AB| = |DE|$
 $m(\widehat{CDE}) = 80^\circ$
 $m(\widehat{BCE}) = 20^\circ$
 $m(\widehat{DAE}) = x = ?$

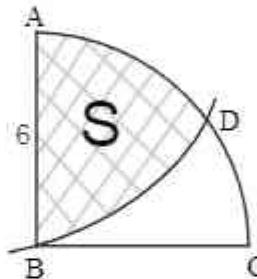
- A) 20 B) 30 C) 40 D) 50 E) 60

38.



- A) 12 B) 16 C) 24 D) 36 E) 48

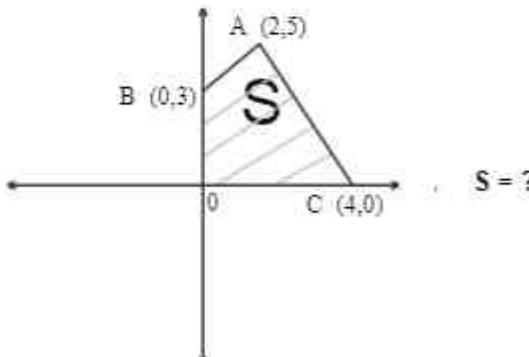
39.



- B merkezli AC çeyrek çemberi ve
 A merkezli \widehat{BD} yarıçapı çizilmiştir.
 $|AB| = 6 \text{ cm}$
 $S = ?$

- A) $12\pi - 9\sqrt{3}$ B) $12\pi - 8\sqrt{3}$ C) $6\pi - 6\sqrt{3}$
 D) $12\pi - 6\sqrt{3}$ E) $12\pi - 3\sqrt{3}$

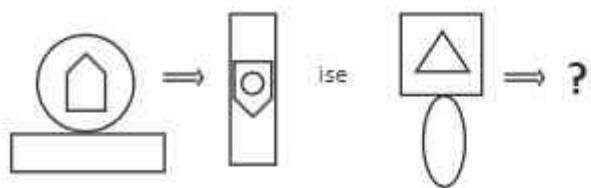
40.



- A) 8 B) 10 C) 13 D) 15 E) 16

TEMEL ÖĞRENME BECERİLERİ

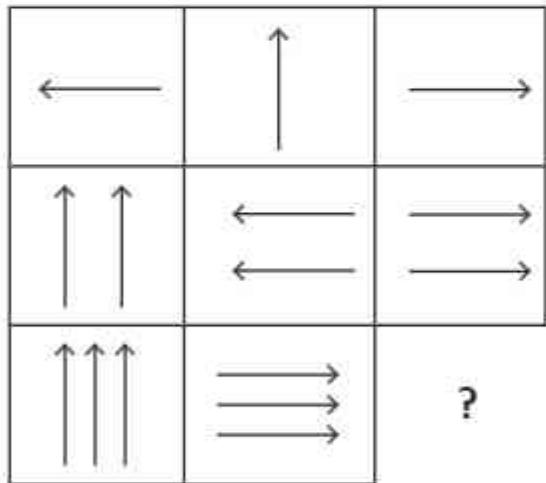
1.



Soru işaretü (?) yerine aşağıdakilerden hangisi gelmelidir?

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

2.



Soru işaretü (?) yerine aşağıdakilerden hangisi gelmelidir?

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

3.

$$\begin{array}{c} \triangle + \circ = \square \\ \diamond + \square = \text{octagon} \\ \text{pentagon} + \triangle = ? \end{array}$$

Soru işaretü (?) yerine aşağıdakilerden hangisi gelmelidir?

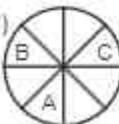
- A)
- B)
- C)
- D)
- E)

4.

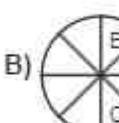
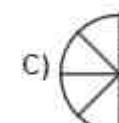
$$\begin{array}{c|c} \odot \oplus \circ \oplus \bullet \oplus & \otimes \odot \odot \oplus \circ \otimes \\ \downarrow & \downarrow \\ \oplus \odot \oplus \circ \oplus \bullet & ? ? ? ? ? ? \end{array}$$

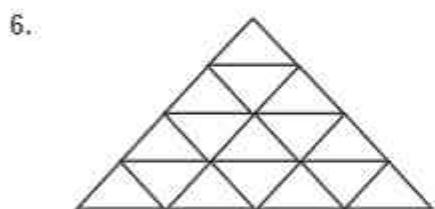
Soru işaretleri (?) yerine aşağıdakilerden hangisi gelmelidir?

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

- 5.
- I)  II)  III) 
- IV)  V)  VI)  VII) ?

Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmemelidir?

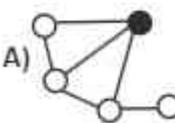
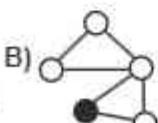
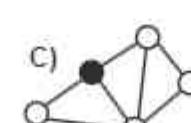
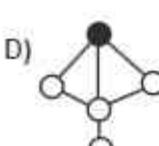
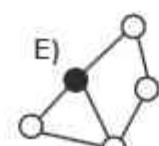
- A)  B)  C) 
- D)  E) 



Yukarıdaki eşkenar üçgenlerden oluşan şekilde farklı büyüklükte kaç tane üçgen vardır?

- A) 7 B) 6 C) 5 D) 4 E) 3

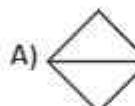
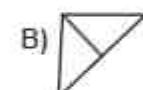
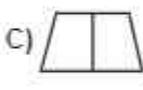
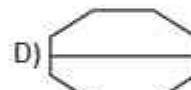
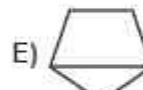
7. Aşağıdaki şekillerden bir grup oluşturulursa hangisi dışarıda kalır?

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

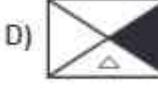
8. Aşağıdaki şekillerden bir grup oluşturulursa hangisi dışarıda kalır?

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

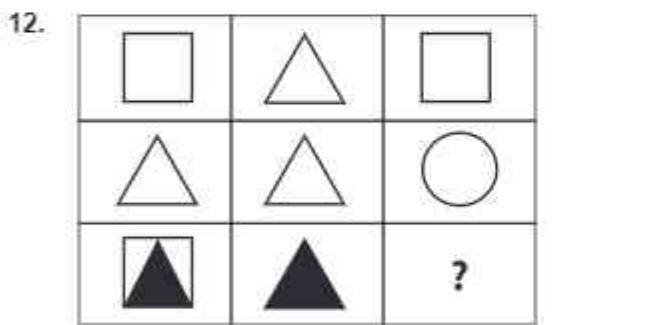
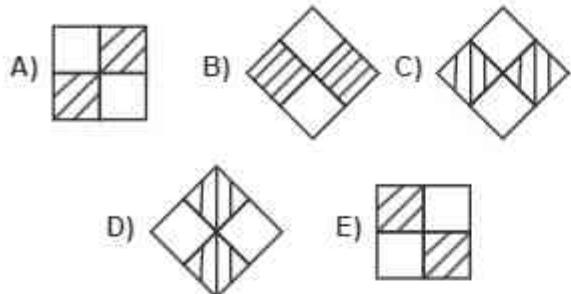
9. Aşağıdaki şekillerden bir grup oluşturulursa hangisi dışarıda kalır?

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

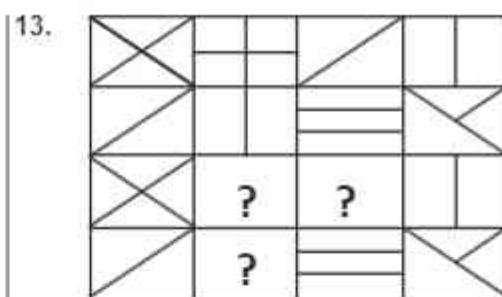
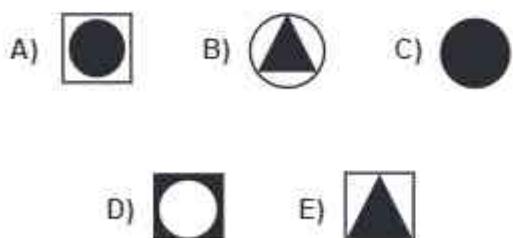
10. Aşağıdaki şekillerden bir grup oluşturulursa hangisi dışarıda kalır?

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

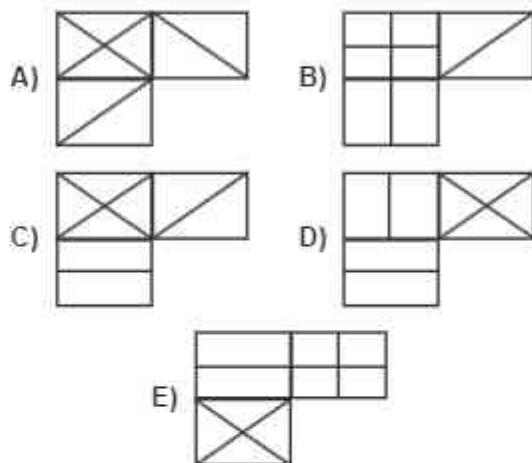
11. Aşağıdaki şekillerden bir grup oluşturulursa hangisi dışarıda kalır?



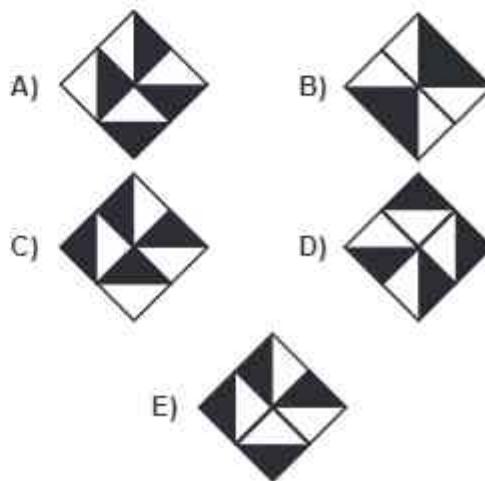
Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?



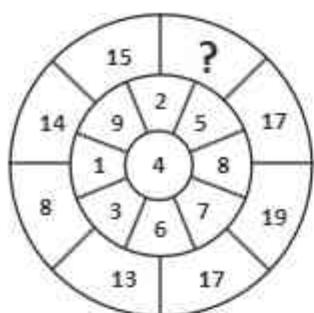
Soru işaretleri (?) yerine aşağıdakilerden hangisi gelmelidir?



Yukarıdaki şekil saat yönünde 180° döndürülürse hangisi elde edilir?



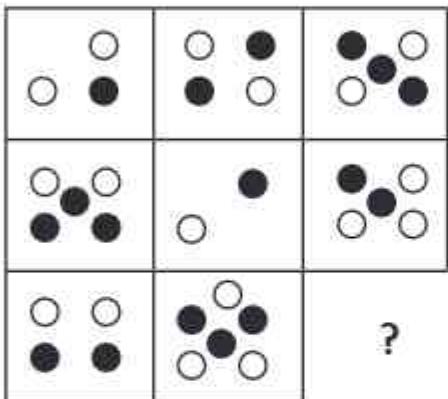
15.



Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 8 B) 10 C) 11 D) 16 E) 28

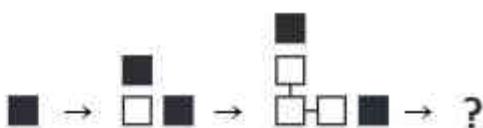
16.



Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) B)
 C) D)
 E)

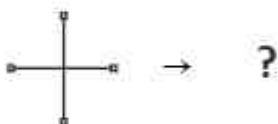
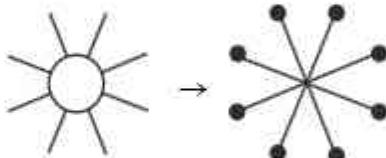
17.



Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) B)
 C) D)
 E)

18.

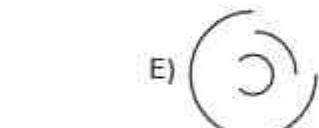


Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) B)
 C) D)
 E)



Soru işaretini (?) yerine aşağıdakilerden hangisi gelmelidir?

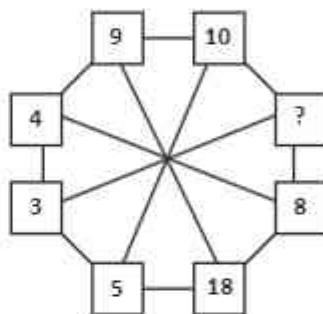


21. 458330, 677, 26, 5, ?

Yukarıdaki seride soru işaretini (?) yerine hangisi gelmelidir?

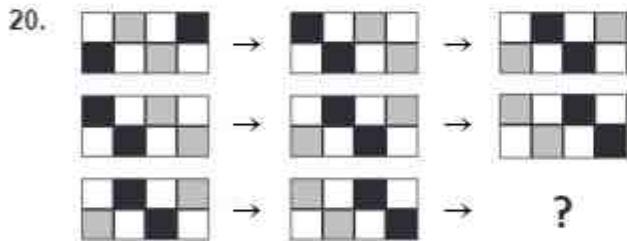
- A) 4 B) 3 C) 2 D) 1 E) 0

- 22.



Soru işaretini (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 6 B) 8 C) 9 D) 12 E) 15

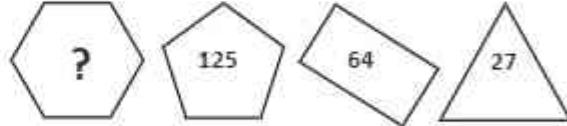


Soru işaretini (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) B) C)

D) E)

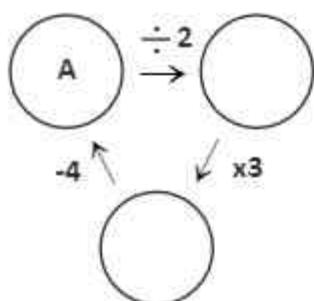
- 23.



Soru işaretini (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 8 B) 243 C) 216 D) 564 E) 196

24.



Yukarıdaki şekilde A 'nın yerine hangi sayı gelmelidir?

- A) 3 B) 4 C) 5 D) 7 E) 8

25. 9 6 10 7 11 ? 12 9

Soru işaretü (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 12 B) 11 C) 10 D) 9 E) 8

26.

9	9	9
8	7	6
7	6	?

Soru işaretü (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 2 B) 3 C) 4 D) 5 E) 6

27.

⊕	A	B	C
A		4	
B			8
C	6		

⊕ toplama işlemi olmak üzere; $A \oplus B \oplus C = ?$

- A) 9 B) 12 C) 15 D) 18 E) 21

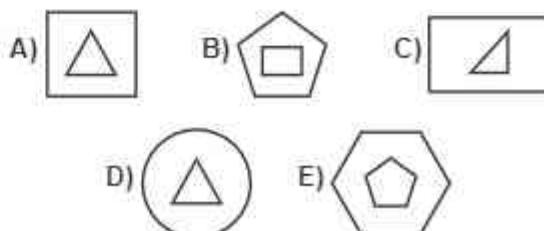
28.



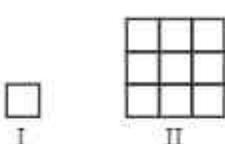
Soru işaretü (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 28 B) 32 C) 36 D) 41 E) 45

29. Aşağıdakilerden bir grup oluşturulursa hangisi dışarıda kalır?



30.



Kenar uzunluğu 1 birim olan karelerden oluşan şekildeki dizinin 6. (VI) elemanının çevresi kaç birimdir?

- A) 36 B) 40 C) 44 D) 52 E) 56

31.



Yukarıda verilen doğrular üzerinde köşeleri siyah noktalardan geçecek kaç farklı üçgen çizilebilir?

- A) 10 B) 9 C) 8 D) 7 E) 6

32. BZRU, AWIL, BARI, ZWUL, ZRAW harf bloklarının sayısal karşılıkları aşağıdaki seçeneklerde karışık olarak verilmiştir.

Buna göre ZWUL'un sayısal karşılığı hangisidir?

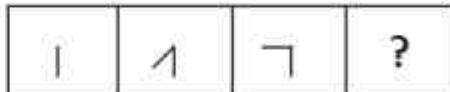
- A) 6715 B) 1509 C) 3672
D) 6529 E) 3170

33. ONDOKUZMAYISONDOKUZMAYISONDOKU.....

174. harf aşağıdakilerden hangisidir?

- A) N B) D C) U D) A E) Y

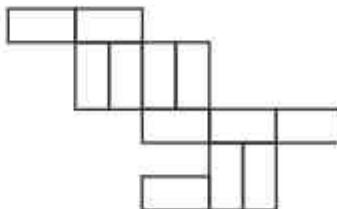
34.



Soru işaretü (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) B)
C) D)
E)

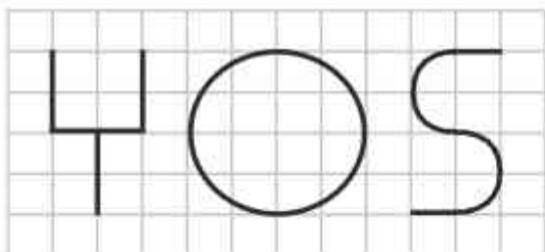
35.



Alanı 384 m^2 olan yukarıdaki şeklin çevresi kaç metredir?

- A) 120 B) 124 C) 144
D) 150 E) 169

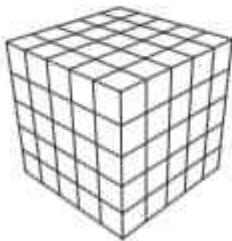
36.



Tel parçalarıyla oluşturulan yukarıdaki latin harflerinin toplam uzunluğu kaç birimdir?

- A) $8 + 6\pi$ B) $10 + 6\pi$ C) $10 + 6\pi^2$
 D) $10 + 8\pi$ E) $10 + 5\pi^2$

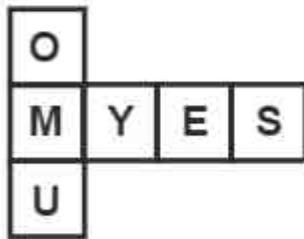
37.



Yukarıdaki büyük küp birbirine eş 125 küçük küpten oluşuyor. Büyük küpün dışı maviye boyandığında, iki yüzü mavi kaç küçük küp elde edilir?

- A) 36 B) 27 C) 24 D) 21 E) 18

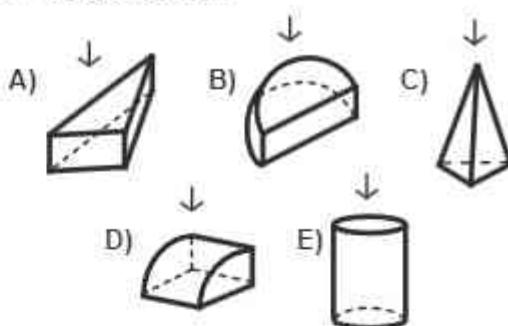
38.



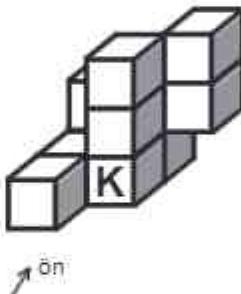
Yukarıdaki şekil küp haline getirilirse hangisi elde edilir?

- A) B) C)
 D) E)

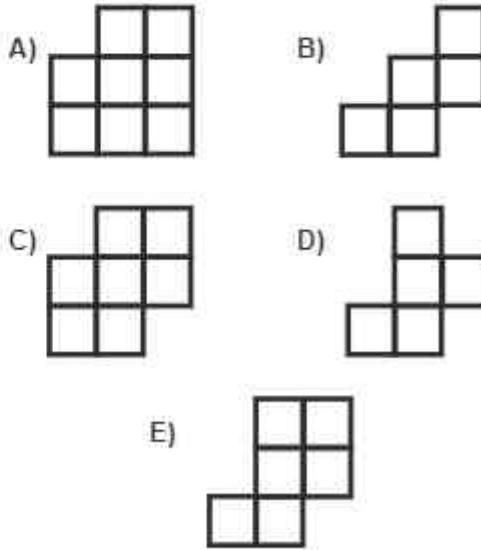
39. Aşağıdakilerden hangisine üstten bakan bir kişi şekli dörtgen görür?



40.



K parçası çıkarılırsa şeitin önden görünüşü aşağıdakilerden hangisidir?





A

SINAVDA UYULACAK KURALLAR

1. Çağrı cihazı, telsiz vb. haberleşme araçları ile cep bilgisayar, her türlü bilgisayar özelliği bulunan cihazlarla; silah ve benzeri teçhizatla; müsvedde kâğıdı, defter, kitap, sözlük, sözlük işlevi olan elektronik aygit, hesap cetveli, pergel, açılıçer, cetvel, hesap makinesi vb. araçlarla sınava girmek yasaktır. Bu araçlarla sınava girmiş öğrenciler mutlaka Salon Sınav Tutanağına yazılacak, bu öğrencilerin sınavları geçersiz sayılacaktır.

2. Sınavda adaylara 120 dakika süre verilmiştir. Sınavın ilk 30 ve son 15 dakikası içinde adayların sınavdan çıkışması kesinlikle yasaktır. **Sınav evrakını teslim ederek salonu terk eden aday, her ne sebeple olursa olsun, tekrar sınava devam ettilmeyecektir.** Cevaplamayı süre bitmeden tamamlarsanız, cevap kâğıdınızı ve soru kitabıınızı salon görevlilerine teslim ederek salonu terk edebilirsiniz. Sınav süresinin bittiği ilan edilip cevap kâğıtları ve soru kitabıları salon görevlileri tarafından toplanıncaya kadar yerinizde kalınız.

3. Sınav süresince görevlilerle konuşmak ve soru sormak yasaktır. Aynı şekilde görevlilerin de adaylarla yakından ve alçak sesle konuşmaları, ayrıca adayların birbirinden kalemleri, şıgli vb. şeyleri istemeleri **kesinlikle yasaktır.**

4. Sınav sırasında kopya çeken, çekmeye kalkışan, kopya veren, kopya çekilmesine yardım edenlerin kimlikleri, Salon Sınav Tutanağına yazılacak ve bu adayların sınavları geçersiz sayılacaktır. Görevliler kopya çekmeye veya vermeye kalkışanları uyarmak zorunda değildir, sorumluluk size aittir. Adayların test sorularına verdikleri cevapların dağılımları bilgi işlem yöntemleriyle inceleneceler, bu incelemelerden elde edilen bulgular bireysel veya toplu olarak kopya girişiminde bulunulduğunu gösterirse, kopya eylemine katılan adayların sınavı iptal edilecektir. **Cevap kâğıdınızı başkaları tarafından görülmeyecek şekilde tutmanız gerekmektedir.** Bu durum sizin için son derece önemlidir. Sınav görevlileri, sınavın kurallara uygun biçimde yapılmadığını veya toplu kopya girişiminde bulunulduğunu raporunda bildirdiği takdirde, OMÜ takdir hakkını kullanarak sınavın tümünü iptal etme hakkına sahiptir.

5. Adaylar, görevlilerin her türlü uyarısını dikkate almak zorundadır. Görevliler, gerektiğinde oturduğunuz yerleri de değiştirebilir. Sınavınızın geçerli sayılması, her şeyden önce sınav kurallarına uymanızı bağıdır. Kurallara aykırı davranışta bulunanların ve yapılacak uyarıları dikkate alınmayanların kimlikleri tutanağa yazılacak ve sınavları geçersiz sayılacaktır.

6. Cevap kâğıdında ilgili alanları doldurmanız gerekmektedir. Cevap kâğıdına yazılacak her türlü yazida ve yapılacak

bütün işaretlemelerde kurşun kalem kullanılacaktır. Tükenmez kalem ve dolma kalem kesinlikle kullanılmayacaktır. Cevapların cevap kâğıdına işaretlenmiş olması gereklidir. Soru kitabılarına işaretlenen cevaplar geçerli değildir.

7. Soru kitabıınızı alır almadığını, sayfaların eksik olup olmadığını, kitabımda basım hatalarının bulunup bulunmadığını kontrol ediniz. Soru kitabılarınızın sayfası eksik veya basımı hatalı ise değiştirilmesi için derhal Salon Başkanına başvurunuz. Soru kitabımda her sayfanın tepsinde basılı bulunan soru kitabı türünün, kitabımda ön kapağında basılı soru kitabı türü ile aynı olup olmadığını kontrol ediniz. Farklı olması durumunda Salon Başkanından yeni bir soru kitabı isteyiniz. Soru kitabılarınızın türünün değişik olduğunu daha sonra fark ederseniz, size o zamana kadar cevaplama yaptığınız türden, hatasız bir soru kitabı verilmesi için Salon Başkanına başvurunuz. **Cevap kâğıdınızda, size verilen soru kitabıının türünü "Soru Kitaplığı Türü" alanında ilgili yuvarlağı doldurarak belirtiniz.** Cevap kâğıdınızda işaretlediğiniz Soru Kitaplığı Türü salon görevlileri tarafından sınav öncesi kontrol edilerek Murekkepli Kalemlle paraflanacaktır. Salon görevlileri tarafından cevap kâğıdınızda ilgili alanın işaretlenmemesi durumunda cevap kâğıdınız değerlendirilemeyecektir. Sizin ve salon görevlilerinin işaretledikleri soru kitabı türü arasında fark olması halinde salon görevlilerinin işaretlediği dikkate alınacaktır.

8. Cevaplamaya geçmeden önce size verilecek soru kitabı üzerinde ayrılan yere adınızı, soyadınızı ve Aday Numaranızı yazıp imzalayınız. Sınav sonunda soru kitabıları ile cevap kâğıtları toplanacak ve tek tek inlenecektir. Soru kitabılarınızın sayfalarının eksik bulunması durumunda sınavınız geçersiz sayılacaktır.

9. Soru kitabılarının sayfalarındaki boş yerleri müsvedde için kullanabilirsiniz.

10. Sınav süresince, görevliler dahil, salonda kimse sigara, pipo, puro vb. şeyleri içmeyecektir.

11. Soruları veya bu sorulara verdığınız cevapları aynı bir kâğıda yazıp bu kâğıdı dışarı çıkarmamanız kesinlikle yasaktır.

12. Sınav salonundan ayrılmadan önce, soru kitabıınızı ve cevap kâğıdınızı salon görevlilerine teslim etmeyi unutmayıniz.

همراه شما
در مسیر یوس

سوالات یوس دانشگاه ۱۹ مایس



Ondokuz Mayıs UNIVERSITY

INTERNATIONAL STUDENTS' EXAM

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۰۲۱۹۱۳۰۵۹۰۶



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A

**ONDOKUZ MAYIS UNIVERSITY
INTERNATIONAL STUDENT EXAM**

May 25, 2014

NAME
SURNAME
CANDIDATE NO
SIGNATURE
	SEAT NUMBER:

GENERAL INFORMATION

1. This booklet includes test questions for international students who wish to study in certain Turkish universities.

The number of questions are as follows:

1. Mathematics	40
2. Basic Learning Skills	40

2. This is an "A" type booklet. Please mark the type of your booklet on the answer sheet as shown below and make sure it has been confirmed by the exam supervisor. **If you do not code the correct booklet type on the answer sheet, your exam will be invalid.**

3. You have 120 minutes to complete the exam.

4. You may start answering the questions in any order you wish.

5. Each question has only one correct answer. Multiple selections will be considered as incorrect.

6. The answers to the questions given in the booklet should be marked on the answer sheet provided with this booklet. Please use a pencil. Do not fold the answer sheet and do not write anything not required on it.

7. Inappropriate markings on the answer sheet will not be read by the optical reader. You are entirely responsible for mistakes incurred by inappropriate markings.

8. Only correct answers will be calculated in this exam. You will not lose any points for incorrect answers.

9. Further information on examination rules are given on the back page of this booklet.

TYPE OF QUESTION BOOKLET	
A <input checked="" type="radio"/>	B <input type="radio"/>
PARAPHRASE	PARAPHRASE

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MATHEMATICS

1. $0,2 \left(0,2 + \frac{1}{5} \right) 0,5 = ?$

- A) 0,04 B) 0,2 C) 0,4 D) 0,5 E) 4

4. $4 + \frac{12}{2 - \frac{3}{2-x}} = 8$

- A) -8 B) -1 C) 1 D) 4 E) 8

2. $\left[(-1)^7 + (-2)^3 \right] \cdot (-3)^{-1} : (-3^2) + 3^{-1} = ?$

- A) $-\frac{26}{3}$ B) $-\frac{2}{3}$ C) 0 D) $\frac{26}{3}$ E) $\frac{2}{3}$

5. $\frac{a^5 + b^3 a^2}{a^2 - b^2} : \frac{\frac{a^2 + b^2}{b} \cdot a}{\frac{1}{b} - \frac{1}{a}} = ?$

- A) 1 B) $a^2 b$ C) a^2 D) a E) ab

3. $\frac{\left(2011 + \frac{1}{2} \right) - \left(2009 - \frac{1}{3} \right)}{\left(2007 + \frac{1}{3} \right) - \left(2005 - \frac{1}{2} \right)} = ?$

- A) -1 B) 0 C) 1 D) 2 E) 3

6. $n \in \mathbb{N}$

$a = 2^n + 6^n$ and $\frac{a}{b} = \frac{14}{13} \Rightarrow a - b = ?$

- A) 8 B) 16 C) 27 D) 32 E) 81

7. $a^2 < a, |b| > b \Rightarrow \frac{|a-b| + |b|}{|-a+2b|} = ?$
 A) -2 B) -1 C) 0 D) 1 E) 2

11. $\frac{(n+1)! + n!}{(n-1)!} = 35 \Rightarrow n=?$
 A) 3 B) 5 C) 7 D) 9 E) 11

8. $\sqrt{7+\sqrt{24}} + \sqrt{7-\sqrt{24}} = ?$
 A) $\sqrt{6}$ B) $2\sqrt{6}$ C) $\sqrt{14}$
 D) $4\sqrt{6}$ E) $6\sqrt{6}$

12.
$$\left. \begin{array}{l} 3^{2x} = 25 \\ 5^y = 27 \end{array} \right\} x, y = ?$$

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

9. $\sqrt[3]{(-3)^6} - \sqrt[3]{(-2)^{15}} - \sqrt[4]{(-4)^2} = ?$
 A) -43 B) -39 C) 21 D) 39 E) 43

13. $\frac{K}{L} = \frac{1}{7}, \frac{L}{M} = \frac{1}{4}, K+L+M=72 \Rightarrow L=?$
 A) 2 B) 12 C) 14 D) 36 E) 56

10. $K = \frac{5}{M}, K+2 = \frac{M+1}{L}, L=?$
 A) 0 B) 1 C) 2 D) 3 E) 4

14. $\frac{i^{-43} + i^{-32}}{i^{13} + i^5} = ?$
 A) $\frac{1-i}{2}$ B) $\frac{1+i}{2}$ C) i D) $1-i$ E) 1

$$\left. \begin{array}{l} (ab2)_4 = (ba3)_5 \\ (ab)_5 + (ba)_4 = (x)_{10} \end{array} \right\} \Rightarrow x=?$$

- A) 15 B) 16 C) 17 D) 20 E) 24

$$\left. \begin{array}{l} f: \mathbb{N} \rightarrow \mathbb{R} \\ f(2x+1) = f(2x-1) + x \\ f(7) = 3 \end{array} \right\} \Rightarrow f(1) = ?$$

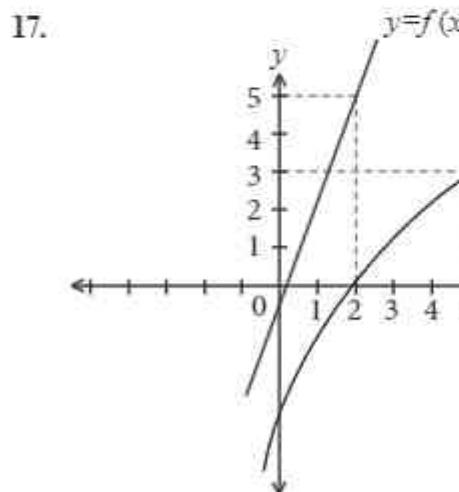
- A) -3 B) -2 C) 2 D) 1 E) 3

$$\left. \begin{array}{l} s(A-B) = 3s(A \cap B) \\ s(A \cup B) = 17 \\ s(B) = 8 \end{array} \right\} \Rightarrow s(B-A) = ?$$

- A) 3 B) 4 C) 5 D) 6 E) 7

$$\log_{16} x = \log_4 3 \Rightarrow x = ?$$

- A) 7 B) 8 C) 9 D) 10 E) 12



$$(g \circ f \circ g^{-1})(0) = ?$$

- A) 0 B) 1 C) 2 D) 3 E) 4

$$20. \quad 0 < x < \frac{\pi}{2}, \quad \sin x = \frac{2}{5} \Rightarrow \cos 2x = ?$$

- A) $\frac{23}{25}$ B) $\frac{21}{25}$ C) $\frac{19}{25}$ D) $\frac{17}{25}$ E) $\frac{3}{5}$

$$\left. \begin{array}{l} x - y + z = 2 \\ 3x - y + 2z = 10 \\ 2x - 6y + z = 5 \end{array} \right\} x + y + z = ?$$

- A) 1 B) 2 C) 3 D) 4 E) 5

22.
$$\frac{(a-1)x^2 + (2a+1)x - 3}{x+1} = \frac{B(x)}{0} \Rightarrow a = ?$$

- A) -5 B) -2 C) -1 D) 0 E) 1

26. $\lim_{x \rightarrow \infty} (2 - 2^{-x} + 2^{x-1}) = ?$

- A) $-\infty$ B) 0 C) 2 D) 3 E) ∞

23. $A = \begin{bmatrix} -2 & -1 \\ \frac{3}{4} & 0 \\ -2 & -\frac{1}{2} \end{bmatrix}$ $B = \begin{bmatrix} 4 & -3 \end{bmatrix}$ $\det(A - B) = ?$

- A) $-\frac{29}{8}$ B) $-\frac{19}{4}$ C) $-\frac{13}{8}$
 D) $\frac{13}{8}$ E) $\frac{19}{4}$

27. $\int \frac{\ln\left(\frac{1}{x}\right)}{x} dx = ?$

- A) $-\ln x + c$ B) $-\ln\frac{1}{x} + c$ C) $\frac{\ln^2 x}{2} + c$
 D) $\frac{\ln x}{x} + c$ E) $-\frac{\ln^2 x}{2} + c$

28. $\int_0^4 x^2 \cdot \operatorname{sgn}(2x) dx = ?$

24. $f : \mathbb{R} \rightarrow \mathbb{R}$

$$f(x) = \operatorname{sgn}(x-4) + |x-3| + x^2$$

$$\lim_{x \rightarrow 3} f(x) = ?$$

- A) 7 B) 8 C) 9 D) 10 E) 14

- A) $\frac{37}{3}$ B) $\frac{91}{3}$ C) $\frac{2}{3}$ D) $\frac{10}{3}$ E) $\frac{64}{3}$

25. $\lim_{x \rightarrow 3} \frac{\sqrt{x+6}-3}{x^2 - 4x + 3} = ?$

- A) $\frac{1}{3}$ B) $\frac{1}{6}$ C) $\frac{1}{12}$
 D) $\frac{1}{18}$ E) $\frac{1}{24}$

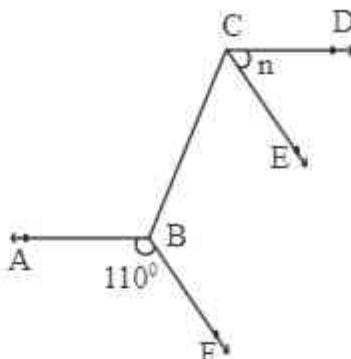
29.
$$\left. \begin{array}{l} f''(x) = 3x-1 \\ f'(0) = 4 \\ f(0) = 1 \end{array} \right\} f(1) = ?$$

- A) -1 B) 1 C) 2 D) 5 E) 6

30. $f'(x) = 2x^2 - 6$
 $f(3) = 5$

- A) 3 B) 5 C) 6 D) 10 E) 12

33.



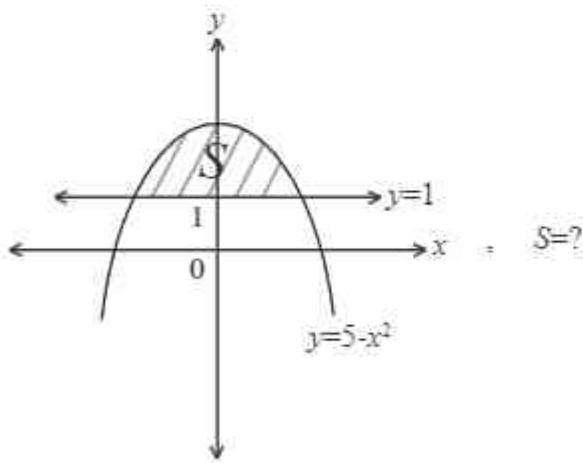
[BA // CD]
[BF // CE]
 $m(\widehat{ABF}) = 110^\circ$
 $m(\widehat{DCE}) = n = ?$

- A) 30 B) 40 C) 50 D) 60 E) 70

31. $f(1-2x) = 3x^2 + x - 3$, $f'(1) = ?$

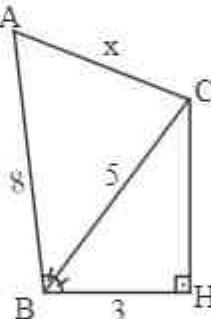
- A) $-\frac{7}{2}$ B) $-\frac{1}{2}$ C) $\frac{1}{2}$ D) $\frac{7}{2}$ E) 7

32.



- A) $\frac{10}{3}$ B) $\frac{16}{3}$ C) $\frac{22}{3}$ D) $\frac{32}{3}$ E) $\frac{44}{3}$

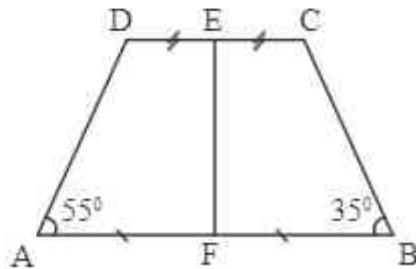
34.



|AB|=8
|CB|=5
|BH|=3
|AC|=x=?

- A) $\sqrt{29}$ B) $\sqrt{34}$ C) $\sqrt{39}$ D) $\sqrt{41}$ E) $\sqrt{55}$

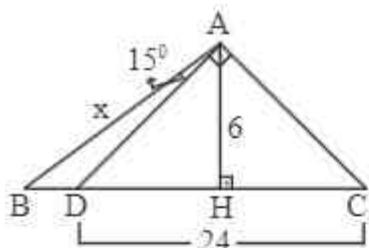
35.



|DC|=4
|AB|=10
|EF|=?

- A) 3 B) 6 C) 7 D) 8 E) 9

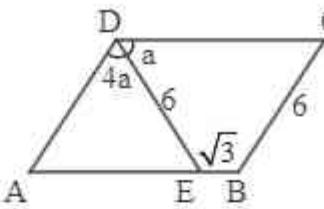
36.



- $|AH|=6$ br
 $|DC|=24$ br
 $m(\text{BAD})=15^\circ$
 $[\text{DA}] \perp [\text{AC}]$
 $[\text{AH}] \perp [\text{BC}]$
 $|\text{AB}|=x=?$

- A) $\sqrt{3}$ B) $2\sqrt{3}$ C) $3\sqrt{3}$ D) $4\sqrt{3}$ E) $6\sqrt{3}$

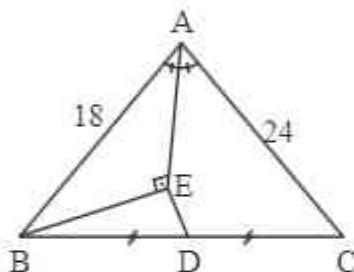
39.



- ABCD parallelogram
 $|\text{DE}|=6$ cm
 $|\text{BC}|=6$ cm
 $|\text{EB}|=\sqrt{3}$ cm
 $m(\widehat{\text{ADE}})=4a$
 $m(\widehat{\text{EDC}})=a$
 $\text{Area}(\text{ABCD})=?$

- A) $21\sqrt{3}$ B) $18\sqrt{3}$ C) $15\sqrt{3}$
 D) $12\sqrt{3}$ E) $9\sqrt{3}$

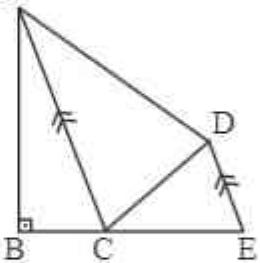
37.



- $[\text{AE}]$ bisecting angle
 $[\text{AE}] \perp [\text{BE}]$
 $|\text{BD}|=|\text{DC}|$
 $|\text{AB}|=18$ cm
 $|\text{AC}|=24$
 $|\text{ED}|=?$

- A) 1 B) 2 C) 3 D) 4 E) 5

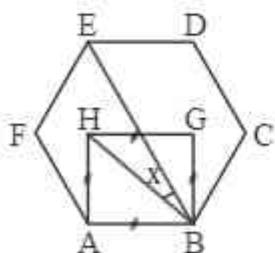
40.



- $[\text{AC}] // [\text{DE}]$
 $|\text{AB}|=4$ cm
 $|\text{BE}|=7$ cm
 $\text{Area}(\text{ABCD})=?$

- A) 28 B) 22 C) 16 D) 11 E) 14

38.



- ABCDEF hexagon
 ABGH square
 $m(\widehat{\text{HBE}})=x=?$

- A) 5 B) 10 C) 15 D) 20 E) 25

Mathematics Test is completed.

BASIC LEARNING SKILLS

1. 2 4 7 14 17 ?

Which number should be replaced in the question mark (?)?

- A) 24 B) 32 C) 28 D) 34 E) 26

2. 3 23 7 79 11 ? ?

Which number in sequence should be replaced in the question marks (? ?)?

- A) 79 and 7 B) 143 and 8
 C) 167 and 15 D) 171 and 3
 E) 54 and 9

3. Words PUSUK, KILIM, SUFIR, ELMUS and FUKIR are coded in numbers.

Accordingly, what is the numerical replacement of FUKIR?

- A) 35256 B) 94152 C) 25087
 D) 05687 E) 68481

4. If a group is formed from the numbers below, which number will be out of this group?

- A) 8154 B) 3627 C) 4637
 D) 5472 E) 1863

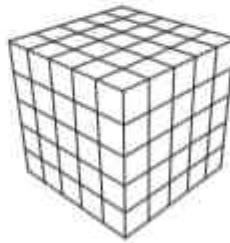
- 5.

+	△	□	○
△		$2 \times \square$	
□			15
○	$3 \times \square$		

In the addition table given above, symbols △, □ and ○ are used in the place of different positive numbers. Accordingly, $\triangle + \square + \circ = ?$

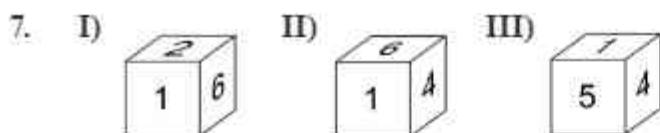
- A) 5 B) 10 C) 15 D) 20 E) 25

- 6.

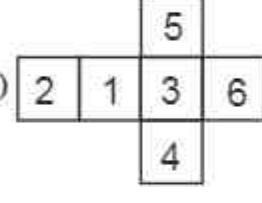
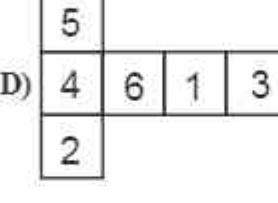
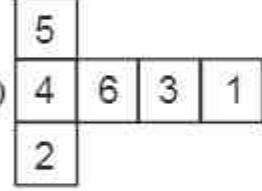


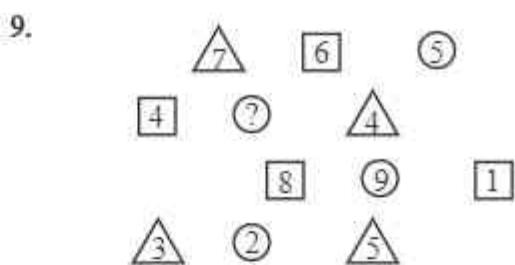
The large cube given above is made up of 125 small equal cubes. Then, the external surface of the large cube is painted. How many small cubes are non-painted?

- A) 36 B) 27 C) 24 D) 21 E) 18



Above, a cube is shown in different dimensions. Accordingly, which of the below is the opening of the cube?

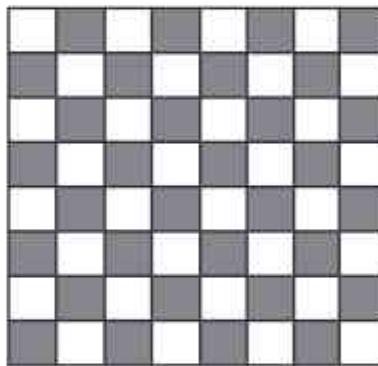
- A)  B) 
- C)  D) 
- E) 



Which of the below should be replaced in the question mark (?)?

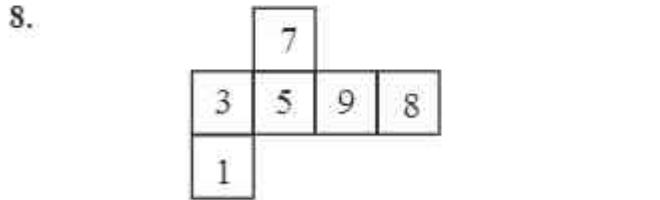
- A) 2 B) 3 C) 5 D) 7 E) 8

10.



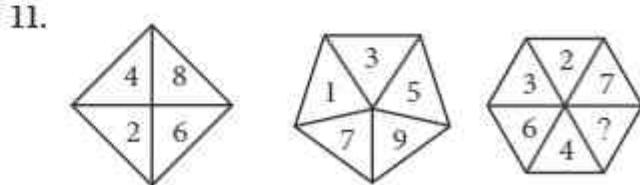
1x1 is cut and taken out from any corner of a 8x8 chess board. Atleast, how many equal triangles can be drawn on the remaining figure?

- A) 8 B) 16 C) 18 D) 20 E) 24



If the figure given above is turned into a cube, what is the total of the neighbouring numbers to "5"?

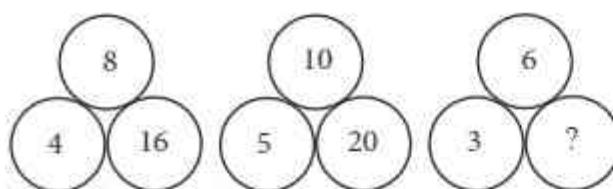
- A) 19 B) 20 C) 21 D) 25 E) 27



Which of the below should be replaced in the question mark (?)?

- A) 8 B) 5 C) 9 D) 1 E) 0

12.



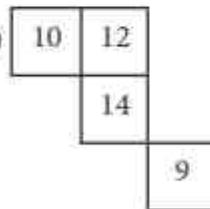
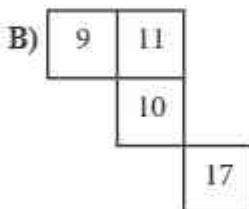
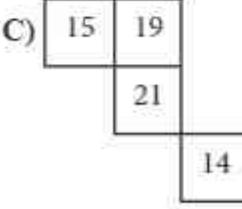
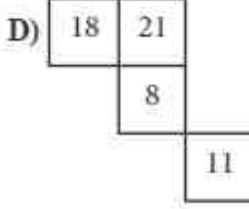
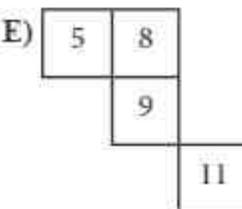
Which of the below should be replaced in the question mark (?)?

- A) 18 B) 12 C) 9 D) 3 E) 1

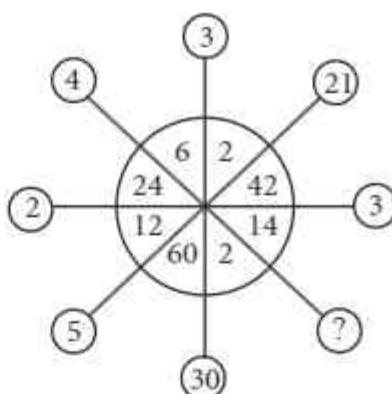
13.

2	7	9	3
5			6
7	12		8
8	13	15	

Which of the following is the shaded area in the above table?

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

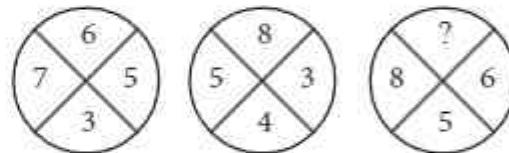
14.



Which of the below should be replaced in the question mark (?)?

- A) 3 B) 4 C) 5 D) 7 E) 11

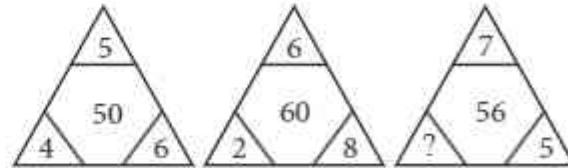
15.



Which of the below should be replaced in the question mark (?)?

- A) 10 B) 9 C) 7 D) 3 E) 4

16.



Which of the below should be replaced in the question mark (?)?

- A) 1 B) 2 C) 3 D) 4 E) 5

17.

3	2	5	4
4	6	1	3
5	2	?	4
2	4	5	3

Which of the below should be replaced in the question mark (?)?

- A) 1 B) 2 C) 3 D) 4 E) 5

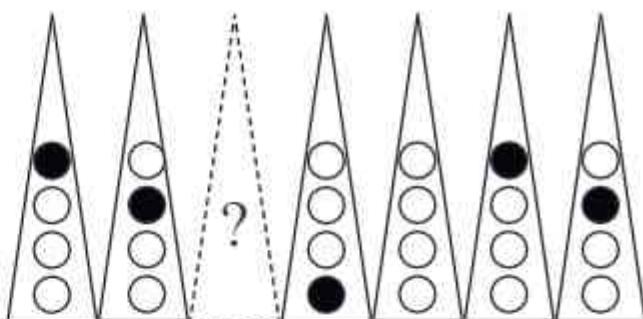
18.

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^	<	>
<	>	?

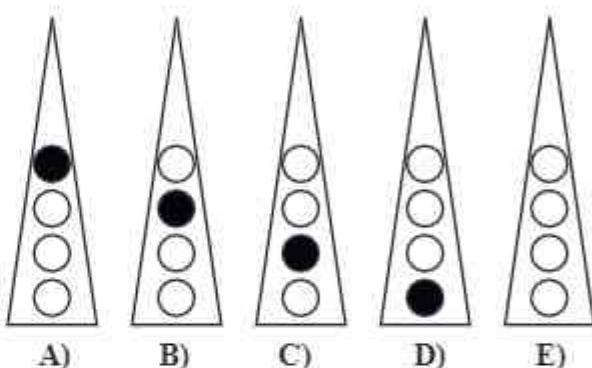
Which of the below should be replaced in the question mark (?)?

- A) B) C)
D) E)

19.



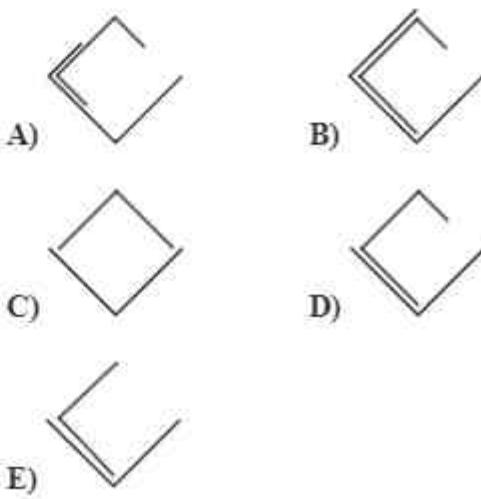
Which of the below should be replaced in the question mark (?)?



20.



Which of the below should be replaced in the question mark (?)?



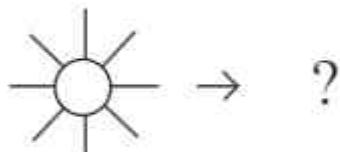
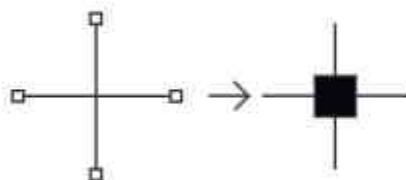
21.



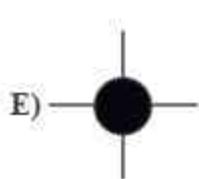
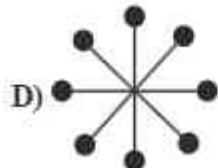
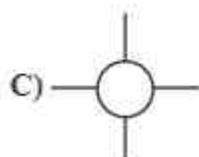
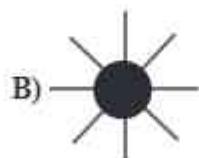
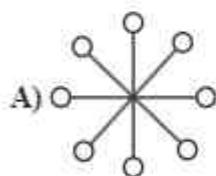
How many different triangles whose corners will be placed on the black dots can be drawn on the lines above?

- A) 6 B) 8 C) 10 D) 12 E) 16

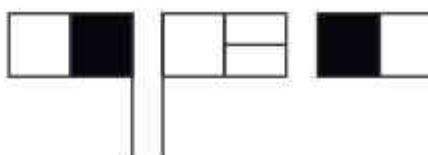
22.



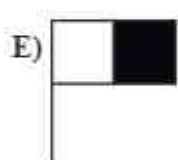
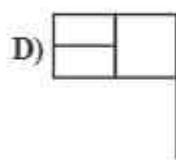
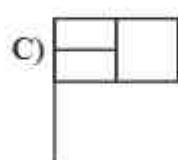
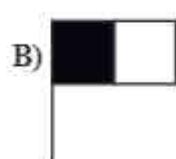
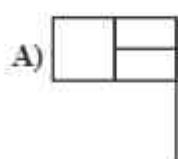
Which of the below should be replaced in the question mark (?)?



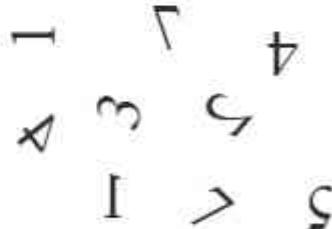
23.



Which of the below should be replaced in the question mark (?)?



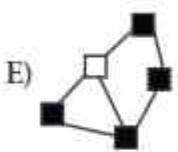
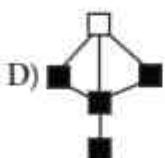
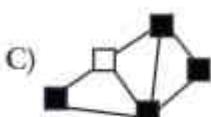
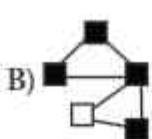
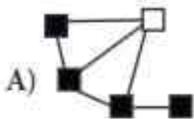
24.



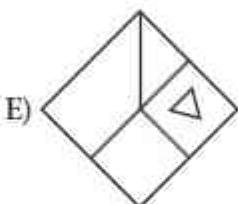
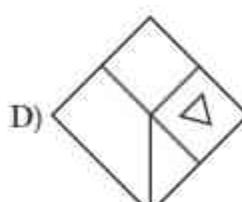
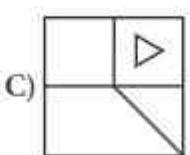
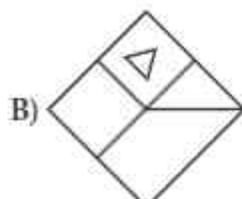
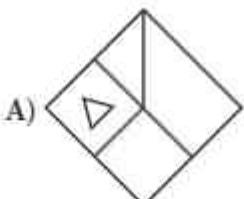
How many of the numbers given above can be put into their correct writing positions if they are independently turned clockwise?

- A) 1 B) 2 C) 3 D) 4 E) 5

25. If the figures below form a group, which is the odd one out?



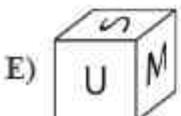
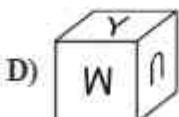
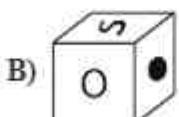
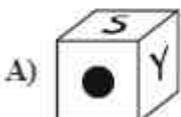
27. If the figures below form a group, which is the odd one out?



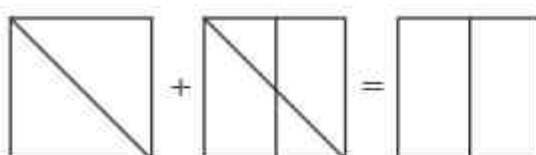
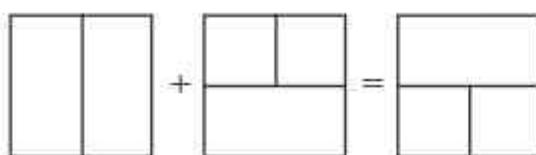
26.

S			
●	U	M	O
Y			

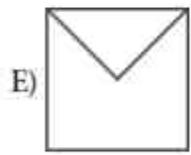
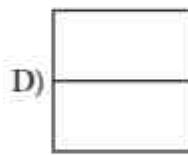
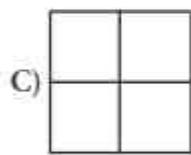
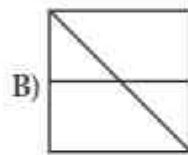
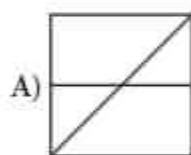
If the above figure is folded into a cube, which of the following cannot be found?



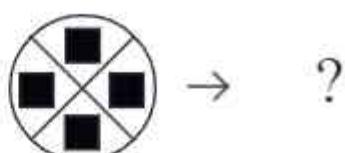
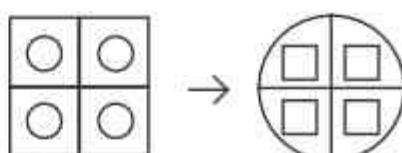
28.



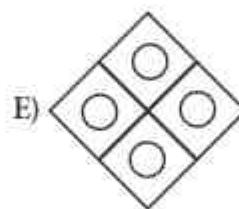
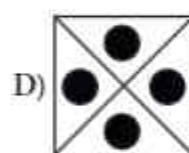
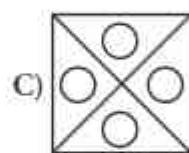
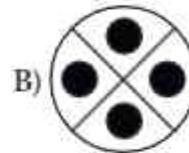
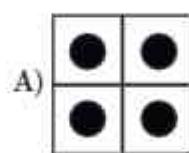
Which of the below should be replace in the question mark (?)?



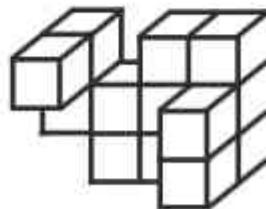
29.



Which of the below should be replaced in the question mark (?)?



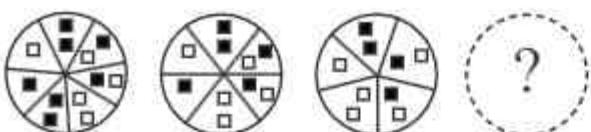
30.



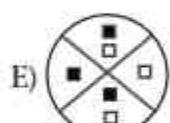
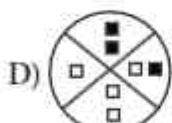
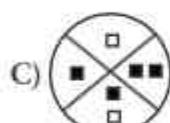
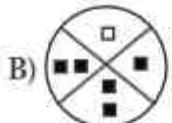
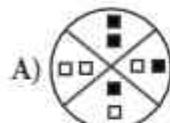
The above figure is formed from identical little cubes put on top of each other. Accordingly, from how many little cubes are used to form the figure above?

- A) 15 B) 14 C) 13 D) 12 E) 11

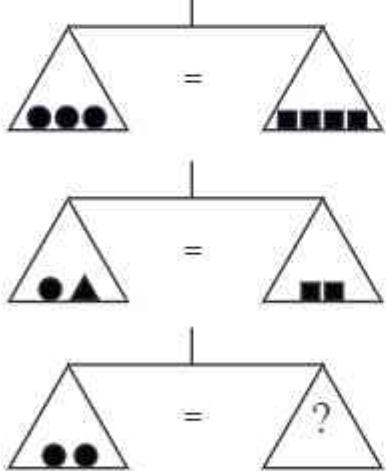
31.



Which of the below should be replaced in the question mark (?)?



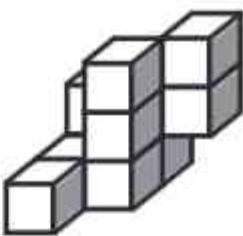
32.



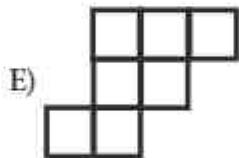
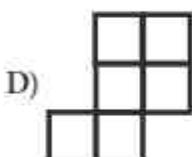
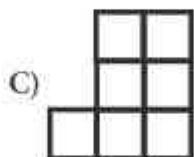
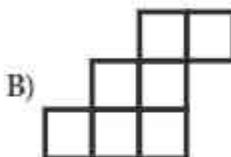
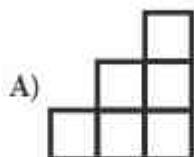
Which of the below should be replaced in the question mark (?)?



33.



Which of the below is the view of the above figure from the right?



34.



Which of the below should be replaced in the question mark (?)?

A) 6

B) 7

C) 8

D) 9

E) 10



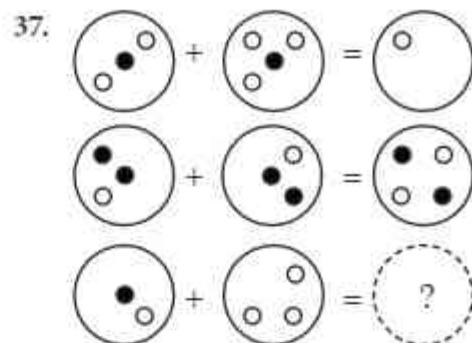
Which of the below should be replaced in the question mark (?)?

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



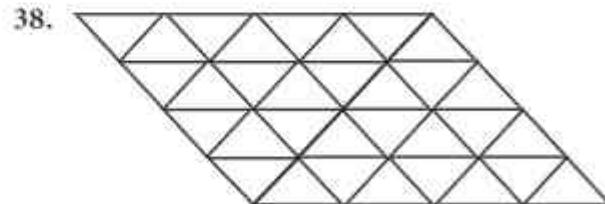
Which of the below should be replaced in the question mark (?)?

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



Which of the below should be replaced in the question mark (?)?

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



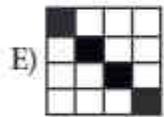
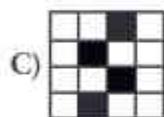
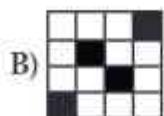
How many different triangles are in the figure above?

- A) 7
- B) 6
- C) 5
- D) 4
- E) 3

39.



Which of the below should be replaced in the question mark (?)?



40. OMUUZEMOMUUZEMOMUUZ...

What is the 153rd letter in the sequence above?

- A) E B) M C) O D) U E) Z



A

EXAMINATION RULES

1. Following materials are prohibited in exam room: Any communication equipments e.g. pagers, walkie-talkies, PDA's, watches with any other functions, weapons, notebooks, books, dictionaries, any electronic device with dictionary function, calculators, calculation charts, compasses, goniometers, rulers and etc. If any candidate enters the exam room with the prohibited materials, his/her name will be recorded and their examinations will be considered invalid.
2. Duration of the exam is **120** minutes. Candidates are not allowed to leave the exam room in the first **30** minutes and the last **5** minutes of the examination. Candidates who completed the exam or left the examination room will not be allowed to re-enter the examination room. If you complete the exam before the end of the duration you can leave the room after submitting your question booklet and answer sheet. When the end of the examination is announced you must remain seated and may not leave the examination room until all papers are collected by the Invigilators.
3. Communicating to the Invigilators during the examination is prohibited. Similarly, it is prohibited for the staff to talk to candidates privately. Candidates are not allowed for exchange of pencils, erasers, papers etc. during the exam.
4. Exam of any candidate who cheats, attempts to cheat or assists cheating will be considered invalid and his/her identity will be recorded. Invigilators do not have to warn the students about cheating. Candidate is responsible for his/her actions. Answers of the candidates will be examined electronically. If any suspicious case is detected regarding individual or collaborate cheating, exams of all candidates seem to participate in this action will be considered invalid. If invigilators reports any case of misconduct in application of the exam or collaborate cheating, OMÜ-YÖS Coordinating Office may decide to consider all of the candidates' exams invalid for that room.
5. All candidates must obey the rules in the exam room. If necessary your seat may be changed by invigilators. Obeying the rules is of utmost importance for validation of the exam. Identity of any candidate who is engaging in misconduct and does not heed the invigilator's warning to discontinue the behavior will be recorded and his/her examination will be considered invalid.
6. You must fill all the required fields on the answer sheet. Only pencils should be used for marking and writing on the answer sheet. Pens or ball point pens should not be used. All the answers should be marked on answer sheet. Answers marked on the question booklet will be considered invalid.
7. Please check your question booklet for missing pages or typos after receiving it. If there are any missing pages or typos on your booklet, please immediately request for changing of the booklet from the head Invigilator. You should also check if the booklet type written on the cover page is same with the booklet type written on every page of the booklet. If you find any difference please request a new booklet from the head invigilator. If you realize any difference about booklet types after you start the examination, request a new booklet of the same type you have answered. Please mark your booklet type on the "Question Booklet Type" area on the answer sheet. Booklet type you have marked will be checked by the invigilators and initialed with a pen. If the related area is not initialed, your answer sheet will not be evaluated. If there is difference between booklet types that you have marked and invigilator have marked evaluation will be based on the one that is marked by invigilators.
8. Please write your name, surname and passport number on the question booklet before starting to answer the questions. All the question booklets and answer sheets will be collected and examined at the end of the examination. In case of missing pages, examination of the related candidate will be considered invalid.
9. You can use the spaces on the question booklet for calculation.
10. Smoking (cigarettes, pipes, cigars etc.) is not allowed during the examination for both candidates and the staff.
11. Writing the questions and/or the answers and taking it out is strictly prohibited.
12. Do not forget to submit your question booklet and answer sheet before leaving the exam room.

همراه شما
در مسیر یوس

سوالات یوس دانشگاه ۱۹ مایس



Ondokuz Mayıs UNIVERSITY

INTERNATIONAL STUDENTS' EXAM

uniland.ir



۰۲۱۹۱۳۰۵۹۰۶



uniland_yos



A

**ONDOKUZ MAYIS ÜNİVERSİTESİ
YÖS SINAVI
17 Mayıs 2015**

ADI :
 SOYADI :
 ADAY NUMARASI :
 İMZА : SIRA NO:

ÖNEMLİ AÇIKLAMA

1. Bu soru kitabı *Türkiye'deki belirli üniversitelerde öğrenim görmek isteyen uluslararası öğrencileri* seçme amacıyla hazırlanmış soruları içermektedir.

Bu testlerin soru adetleri şöyledir:

Matematik	40
Temel Öğrenme Becerileri	40

2. Bu soru kitabıının türü A'dır. Kitapçık türünü cevap kağıdınızda ilgili yere aşağıda gösterilen şekilde kodlayınız ve salon görevlisinin de ilgili yere kodladığınız bilgiyi onaylamasını sağlayınız.

Bu kodlamayı cevap kağıdınıza yapmadığınız veya yanlış yaptığınız takdirde, sınavınızın değerlendirilmesi mümkün değildir.

3. Sınavda adaylara toplam 120 dakika süre verilmiştir.

4. Test kitabındaki her sorunun yalnızca bir doğru cevabı vardır. Bir soru için birden fazla cevap yeri işaretlenmişse o soru yanlış cevaplanmış sayılacaktır.
5. Soruların cevaplarını kitapçıkla birlikte verilen cevap kağıdında ayıran yerlere kurşun kalemlle işaretleyiniz. Cevap kağıdını buruşturmayınız, üzerine gereksiz hiçbir işaret koymayınız.
6. Cevap kağıdında soruların cevapları doğru biçimde işaretlenmediğinde optik okuyucu cevabı algılayamayacaktır. Yanlış işaretlemelerden kaynaklanan hatalardan aday sorumludur.
7. Bu sınavın değerlendirilmesi doğru cevap sayısı üzerinden yapılacak, yanlış cevaplar dikkate alınmayacağından emin olun.
8. Sınavda uygulanacak diğer kurallar bu kitabıñ arkası kapağında belirtilmiştir.

SORU KİTAPÇIĞI TÜRÜ	
A <input checked="" type="radio"/>	B <input type="radio"/>
Paraf	Paraf

Bu testlerin her hakkı saklıdır. Hangi amaçla olursa olsun, testlerin tamamının veya bir kısmının OMÜ'nün yazılı izni olmadan kopya edilmesi, fotoğrafının çekilmesi, herhangi bir yolla çoğaltılmasi, yayınlanması ya da kullanılması yasaktır. Bu yasağa uymayanlar, gerekli cezai sorumluluğu ve testlerin hazırlanmasındaki mali külleti peşinen kabullenmiş sayılır.

ÖRNEKTİR

MATEMATİK

1. $\frac{(-2^2)^{-1} \cdot 2^{-2} - 2^{-2}}{-2^{-1} + (2 - 2^{-2})} = ?$

A) $-\frac{5}{4}$

B) -1

C) 0

D) 1

E) $\frac{5}{4}$

4. $\frac{7 \cdot \frac{14}{3} - \frac{7}{2} + \left(\frac{2}{3}\right)^{-2}}{\frac{1}{10} \cdot \frac{6}{5} - 1} = ?$

A) 3

B) $\frac{1}{4}$

C) $-\frac{3}{11}$

D) $-\frac{9}{4}$

E) 7

3. $6 \cdot \frac{\frac{2+x}{2} - 1}{1 - \frac{1}{2}} = 3 \Rightarrow x = ?$

A) -1

B) $-\frac{1}{2}$

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

D) 2

E) 8

6. $a < b < c$ olmak üzere a, b ve c ardışık çift tam sayılar olduğuna göre;

$$\frac{(a-c)(b-a)^2}{b-c} = ?$$

A) -8

B) -4

C) -2

D) 4

E) 8

8. $x = 2^{60}$, $y = 3^{84}$, $z = 5^{108}$ olduğuna göre aşağıdaki sıralamalardan hangisi doğrudur?

- A) $z < x < y$
 B) $z < y < x$
 C) $y < z < x$
 D) $x < z < y$
 E) $x < y < z$

9. $\frac{2^6 - 2^{12}}{(2^3 + 1)(2^3 - 1)} = ?$

- A) -2^{12} B) -2^6 C) 2^6
 D) 2^8 E) 2^{12}

12. %10'unun %70'i 14 olan sayı kaçtır?

- A) 120 B) 150 C) 200
 D) 220 E) 250

13. $|x-1|^2 = 4$ eşitliğini sağlayan x gerçel sayı değerlerinin toplamı kaçtır?

- A) -3 B) -2 C) 1 D) 2 E) 3

- 14.

Yaş	5	7	10	12
Çocuk Sayısı	2	4	3	1

Yukarıdaki tablo, bir gruptaki çocukların sayısı ile yaşlarını göstermektedir. Bu grubun yaş ortalaması kaçtır?

- A) 6 B) 8 C) 10 D) 12 E) 14

$$\left. \begin{array}{l} \frac{a}{2} = \frac{b}{3} = \frac{c}{5} \\ 4a - 5b + 3c = 16 \end{array} \right\} \Rightarrow a+b+c=?$$

- A) -20 B) -10 C) 10 D) 20 E) 30

$$f(x+1) - f(x) = \frac{1}{2}, \quad f(1) = 3 \Rightarrow f(100) = ?$$

- A) $\frac{101}{2}$ B) $\frac{103}{2}$ C) $\frac{105}{2}$
 D) $\frac{107}{2}$ E) $\frac{109}{2}$

$$\left. \begin{array}{l} x+y=15 \\ y+z=16 \\ x+z=17 \end{array} \right\} \Rightarrow x+y+z=?$$

- A) 35 B) 33 C) 30 D) 27 E) 24

$$Z \in \mathbb{C}, \quad Z = 2+3i \Rightarrow \text{Im}(Z^{-1}) = ?$$

- A) $-\frac{3}{13}$ B) $-\frac{2}{13}$ C) 0
 D) $\frac{2}{13}$ E) $\frac{3}{13}$

$$\left. \begin{array}{l} A = \{1, \{1\}, 2, 3, \{2, 3\}\} \\ B = \{1, \{2\}, \{1, 2\}, \{3\}, 3\} \end{array} \right\} \Rightarrow A \cap B = ?$$

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

$$A = \begin{bmatrix} x-1 & 3 \\ 10 & y+3 \end{bmatrix}, \quad B = \begin{bmatrix} 2 & z \\ 10 & -5 \end{bmatrix},$$

$$A = B \Rightarrow x, y, z = ?$$

- A) -18 B) -19 C) -20
 D) -21 E) -22

23. $\log_7(4x-5) - \log_7(3x+4) = 0 \Rightarrow x = ?$
 A) 7 B) 8 C) 9 D) 10 E) 11

26. $f(x) = \int (\sin x + 2\cos x) dx$ fonksiyonu
 veriliyor. $f\left(\frac{\pi}{2}\right) = 2$ olduğuna göre $f(0) = ?$

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

24. $f(x) = \frac{x^2+1}{1-|x-1|}$ fonksiyonunun en geniş
 tanım kümesi aşağıdakilerden hangisidir?

- A) $\mathbb{R} - \{0, 2\}$ B) $\mathbb{R} - \{2\}$ C) $\mathbb{R} - \{0\}$
 D) $\mathbb{R} - \{0, -2\}$ E) \mathbb{R}

$$28. f(x) = \begin{cases} ax+1, & x < -1 \\ 2x-a, & -1 \leq x < 2 \\ \frac{a}{3}x+5, & x \geq 2 \end{cases}$$

fonksiyonu veriliyor. $f(1) = f(-2)$ olduğuna
 göre $f(3) = ?$

- A) 2 B) 3 C) 4 D) 5 E) 6

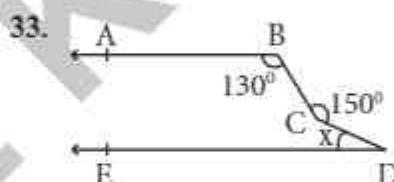
32. $f(2x) = \frac{2x}{x^3 + 1}$, $f'(2) = ?$

- A) $-\frac{1}{2}$ B) $\frac{1}{4}$ C) $-\frac{1}{4}$
 D) $\frac{10}{27}$ E) $-\frac{10}{27}$

30. $f(x) = \begin{cases} 3x+a, & x < -1 \\ 4, & x = -1 \\ 2x^2-b, & x > -1 \end{cases}$

fonksiyonu \mathbb{R} 'de sürekli olduğuna göre $a+b=?$

- A) 1 B) 2 C) 3 D) 4 E) 5



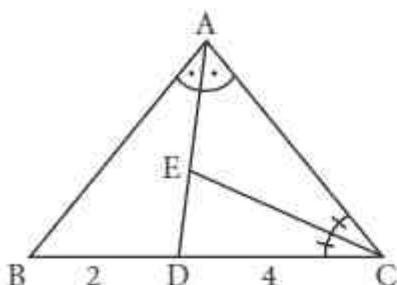
[BA] // [DE]
 $m(\widehat{ABC}) = 130^\circ$
 $m(\widehat{BCD}) = 150^\circ$
 $m(\widehat{CDE}) = x = ?$

- A) 40 B) 35 C) 30 D) 25 E) 20

31. $\lim_{x \rightarrow 3^-} \frac{|x-3|}{2x-6} = ?$

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

35.



ABC üçgen, [AD] ve [CE] iç açıortayları

$$2|AE|=5|ED|$$

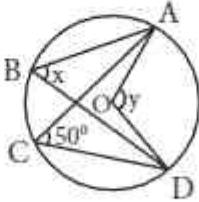
$$|BD|=2 \text{ cm}, |CD|=4 \text{ cm}$$

Çevre(ABC)=?

- A) 20 B) 21 C) 22 D) 23 E) 24

ÖRNEKTİR

40.



O merkezli çemberde
 $m(\widehat{ACD})=50^\circ$
 $m(\widehat{AOD})=y$
 $m(\widehat{ABD})=x$
 $x+y=?$

- A) 120 B) 150 C) 160
 D) 165 E) 180

Matematik Testi Bitti.

TEMEL ÖĞRENME BECERİLERİ



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



Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 8 B) 289 C) 216
D) 512 E) 225

4. 12, 13.75, 11.25, 13, 10.5, ?

Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 12.25 B) 12 C) 11,75
D) 11,5 E) 11,25

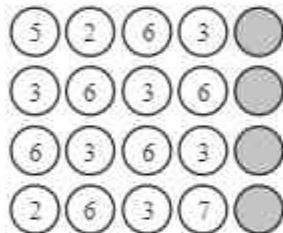
8.

17 410 33 39 711 24 57 ? 51

Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 612 B) 576 C) 512 D) 126 E) 675

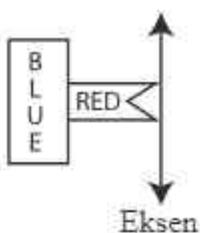
7.



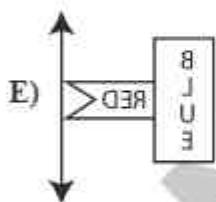
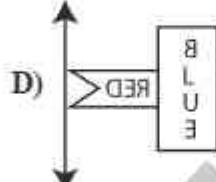
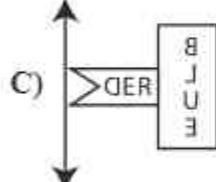
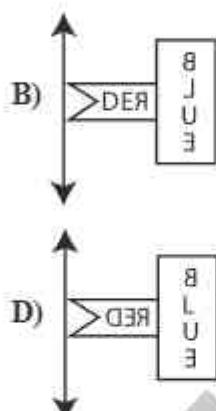
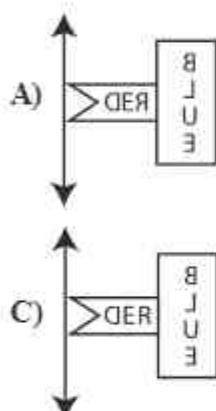
Tarali alan yerine aşağıdakilerden hangisi gelmelidir?

- | | | | | | |
|----|-----|----|-----|----|-----|
| A) | (3) | B) | (1) | C) | (3) |
| | (5) | | (2) | | (5) |
| | (6) | | (3) | | (4) |
| | (2) | | (4) | | (7) |
| | | | | | |
| D) | (3) | E) | (2) | | |
| | (6) | | (7) | | |
| | (3) | | (3) | | |
| | (8) | | (3) | | |

10.



Yukarıdaki şenin verilen eksene göre simetriği aşağıdakilerden hangisidir?



11. Bugün günlerden perşembe ve saat: 22:00 ise 225 saat sonraki gün ve saat aşağıdakilerden hangisidir?

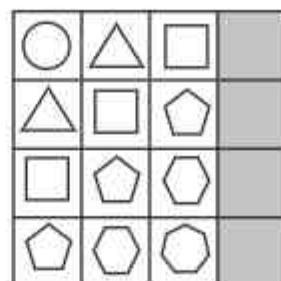
<u>Gün</u>	<u>Saat</u>
A) Cumartesi	07:00
B) Cuma	07:00
C) Cumartesi	19:00
D) Pazar	07:00
E) Pazar	19:00

14. 21 18 24 15 \triangle 12
9 11 14 18 \triangle 35 \square

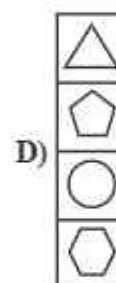
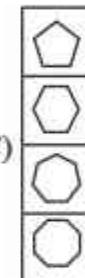
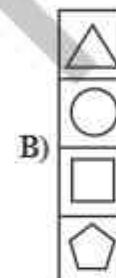
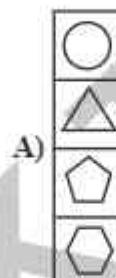
ise $\square = ?$

- A) 42 B) 48 C) 50 D) 62 E) 64

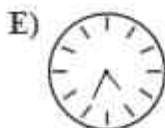
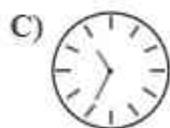
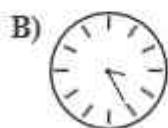
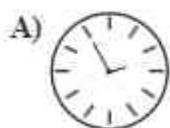
17.



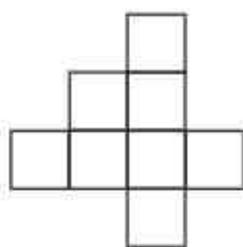
Taralı alan yerine aşağıdakilerden hangisi gelmelidir?



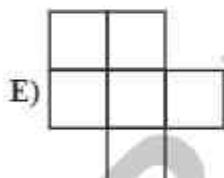
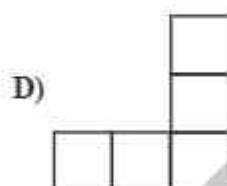
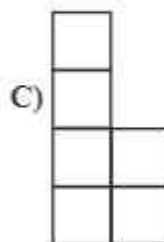
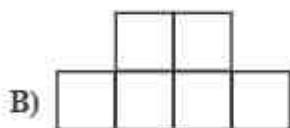
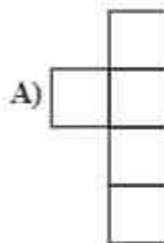
16. Saat 20:25 te saatin aynadaki görüntüsü hangisidir?



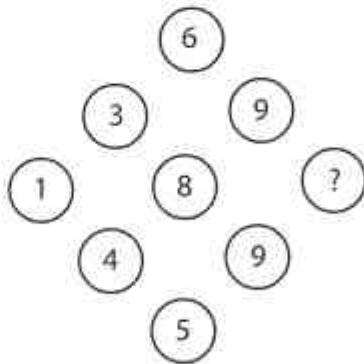
19.



Aşağıdakilerden hangisi verilen şeklin bir parçası değildir?



21.



Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 6 B) 7 C) 8 D) 9 E) 10

15	10	25	20	35	30	45	X	Y
----	----	----	----	----	----	----	---	---

$$X+Y=?$$

- A) 25 B) 55 C) 65 D) 85 E) 95

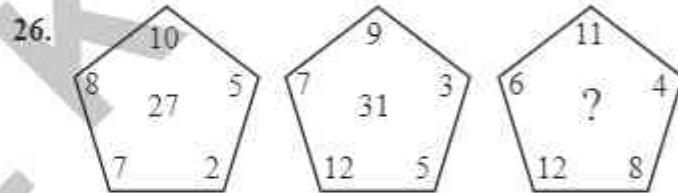
24.

$\triangle(2) = 3 \cdot 2 = 6$

$(4) = 2 \cdot \pi \cdot 4 = 8\pi$

$\frac{\triangle(\pi) + \triangle(\pi)}{(6)} = ?$

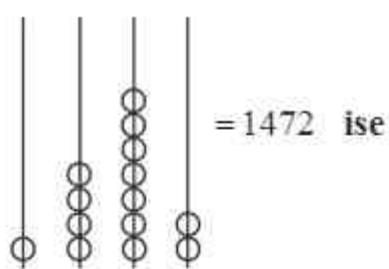
- A) $\frac{1}{4}$ B) $\frac{1}{3}$ C) $\frac{1}{2}$ D) $\frac{3}{4}$ E) 1



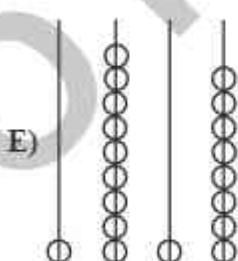
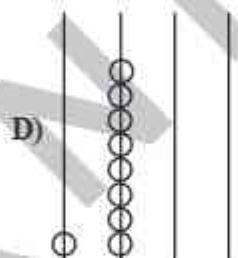
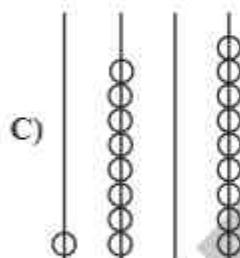
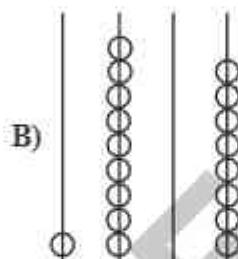
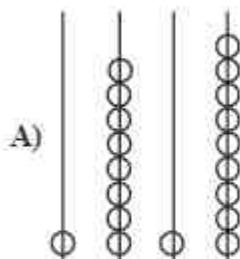
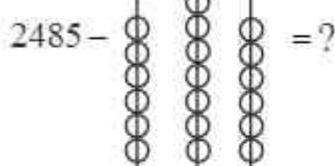
Soru işaretü (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 17 B) 55 C) 41 D) 36 E) 38

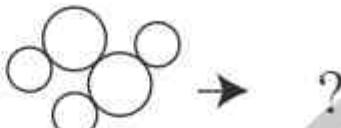
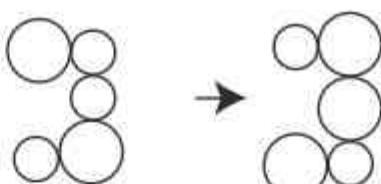
28.



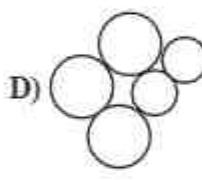
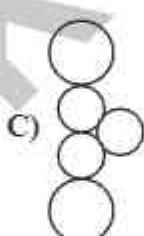
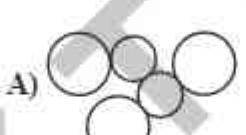
$$= 1472 \text{ ise}$$



29.

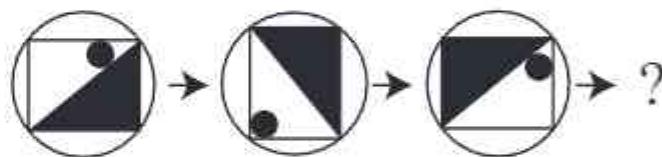


Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

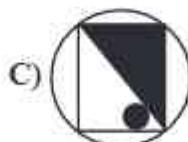
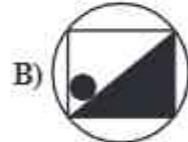


ÖRNEKTİR

33.



Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

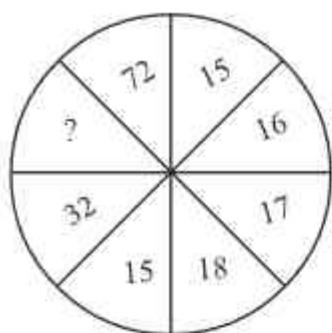


- 31.
- | | | | |
|--|--|--|--|
| | | | |
|--|--|--|--|

$$X+Y = ?$$

- A) 142 B) 136 C) 130 D) 124 E) 118

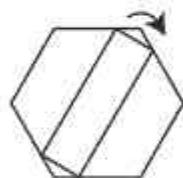
34.



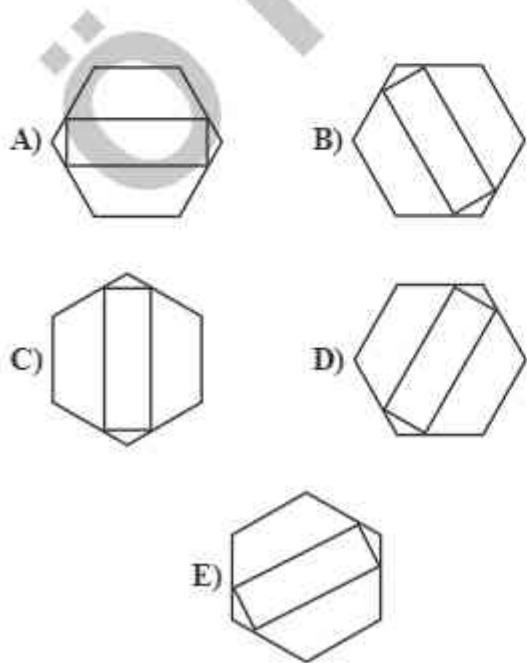
Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 49 B) 51 C) 59 D) 61 E) 69

35.



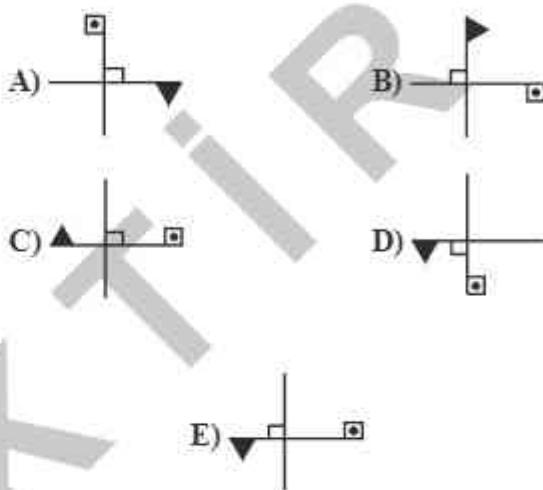
Yukarıdaki şekil ok yönünde 240° döndürülürse hangisi elde edilir?



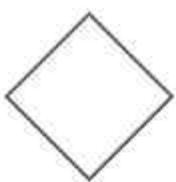
36.



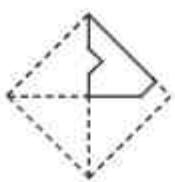
Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?



37.



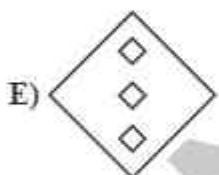
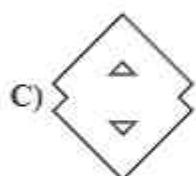
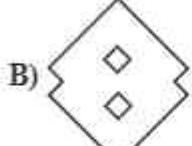
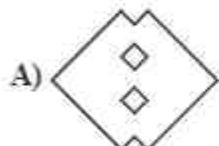
Şekil-I



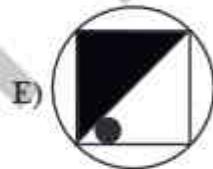
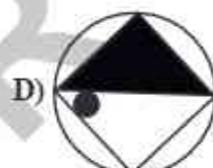
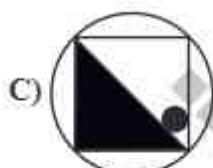
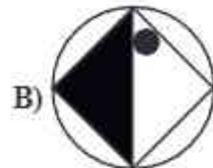
Şekil-II

Şekil-I'deki eşkenar dörtgen şeklindeki bir kağıt, Şekil-II'deki gibi katlanıp kesiliyor.

Kağıt tekrar açılıncı aşağıdaki şekillerden hangisi oluşur?



39. Aşağıdakilerden bir grup oluşturulursa hangisi dışarıda kahr?



40.



...

Yukarıdaki şekil tamamlandığında içerisinde 47 siyah kare olacaksa şeklin içinde kaç tane beyaz kare olur?

- A) 80 B) 79 C) 78 D) 77 E) 76

ÖRNEKTİR



A

SINAVDA UYULACAK KURALLAR

1. Çağrı cihazı, telsiz vb. haberleşme araçları ile cep bilgisayar, her türlü bilgisayar özelliği bulunan cihazlarla; silah ve benzeri teçhizatla; müsvedde kâğıdı, defter, kitap, sözlük, sözlük işlevi olan elektronik aygit, hesap cetveli, pergel, açılıçer, cetvel, hesap makinesi vb. araçlarla sınava girmek yasaktır. Bu araçlarla sınava girmiş öğrenciler mutlaka Salon Sınav Tutanağına yazılacak, bu öğrencilerin sınavları geçersiz sayılacaktır.

2. Sınavda adaylara 120 dakika süre verilmiştir. Sınavın ilk 30 ve son 5 dakikası içinde adayların sınavdan çıkışması kesinlikle yasaktır. **Sınav evrakını teslim ederek salonu terk eden aday, her ne sebeple olursa olsun, tekrar sınava devam ettilmeyecektir.** Cevaplamayı süre bitmeden tamamlarsanız, cevap kâğıdınızı ve soru kitabıınızı salon görevlilerine teslim ederek salonu terk edebilirsiniz. Sınav süresinin bittiği ilan edilip cevap kâğıtları ve soru kitapçıları salon görevlileri tarafından toplanıncaya kadar yerlerinizde kalınız.

3. Sınav süresince görevlilerle konuşmak ve soru sormak yasaktır. Aynı şekilde görevlilerin de adaylarla yakından ve alçak sesle konuşmaları, ayrıca adayların birbirinden kalemleri, şıgli vb. şeyleri istemeleri **kesinlikle yasaktır.**

4. Sınav sırasında kopya çeken, çekmeye kalkışan, kopya veren, kopya çekilmesine yardım edenlerin kimlikleri, Salon Sınav Tutanağına yazılacak ve bu adayların sınavları geçersiz sayılacaktır. Görevliler kopya çekmeye veya vermeye kalkışanları uyarmak zorunda değildir, sorumluluk size aittir. Adayların test sorularına verdikleri cevapların dağılımları bilgi işlem yöntemleriyle inceleneceler, bu incelemelerden elde edilen bulgular bireysel veya toplu olarak kopya girişiminde bulunulduğunu gösterirse, kopya eylemine katılan adayların sınavı iptal edilecektir. **Cevap kâğıdınızı başkaları tarafından görülmeyecek şekilde tutmanız gerekmektedir.** Bu durum sizin için son derece önemlidir. Sınav görevlileri, sınavın kurallara uygun biçimde yapılmadığını veya toplu kopya girişiminde bulunulduğunu raporunda bildirdiği takdirde, OMÜ takdir hakkını kullanarak sınavın tümünü iptal etme hakkına sahiptir.

5. Adaylar, görevlilerin her türlü uyarısını dikkate almak zorundadır. Görevliler, gerektiğinde oturduğunuz yerleri de değiştirebilir. Sınavınızın geçerli sayılması, her şeyden önce sınav kurallarına uymanızı bağıdır. Kurallara aykırı davranışta bulunanların ve yapılacak uyarıları dikkate alınmayanların kimlikleri tutanağa yazılacak ve sınavları geçersiz sayılacaktır.

6. Cevap kâğıdında ilgili alanları doldurmanız gerekmektedir. Cevap kâğıdına yazılacak her türlü yazida ve yapılacak

bütün işaretlemelerde kurşun kalem kullanılacaktır. Tükenmez kalem ve dolma kalem kesinlikle kullanılmayacaktır. Cevapların cevap kâğıdına işaretlenmiş olması gereklidir. Soru kitabılarına işaretlenen cevaplar geçerli değildir.

7. Soru kitabıınızı alır almaz, sayfaların eksik olup olmadığını, kitabımda basım hatalarının bulunup bulunmadığını kontrol ediniz. Soru kitabılarınızın sayfası eksik veya basımı hatalı ise değiştirilmesi için derhal Salon Başkanına başvurunuz. Soru kitabımda her sayfanın tepsisinde basılı bulunan soru kitabı türünün, kitabımdın ön kapağında basılı soru kitabı türü ile aynı olup olmadığını kontrol ediniz. Farklı olması durumunda Salon Başkanından yeni bir soru kitabı isteyiniz. Soru kitabılarınızın türünün değişik olduğunu daha sonra fark ederseniz, size o zamana kadar cevaplama yaptığınız türden, hatasız bir soru kitabı verilmesi için Salon Başkanına başvurunuz. **Cevap kâğıdınızda, size verilen soru kitabıının türünü "Soru Kitaplığı Türü" alanında ilgili yuvarlağı doldurarak belirtiniz.** Cevap kâğıdınızda işaretlediğiniz Soru Kitaplığı Türü salon görevlileri tarafından sınav öncesi kontrol edilerek Murekkepli Kalemlle paraflanacaktır. Salon görevlileri tarafından cevap kâğıdınızda ilgili alanın işaretlenmemesi durumunda cevap kâğıdınız değerlendirilemeyecektir. Sizin ve salon görevlilerinin işaretledikleri soru kitabı türü arasında fark olması halinde salon görevlilerinin işaretlediği dikkate alınacaktır.

8. Cevaplamaya geçmeden önce size verilecek soru kitabı üzerinde ayrılan yere adınızı, soyadınızı ve Aday Numaranızı yazıp imzalayınız. Sınav sonunda soru kitabı ile cevap kâğıtları toplanacak ve tek tek inlenecektir. Soru kitabılarınızın sayfalarının eksik bulunması durumunda sınavınız geçersiz sayılacaktır.

9. Soru kitabılarının sayfalarındaki boş yerleri müsvedde için kullanabilirsiniz.

10. Sınav süresince, görevliler dahil, salonda kimse sigara, pipo, puro vb. şeyleri içmeyecektir.

11. Soruları veya bu sorulara verdığınız cevapları ayrı bir kâğıda yazıp bu kâğıdı dışarı çıkarmamanız kesinlikle yasaktır.

12. Sınav salonundan ayrılmadan önce, soru kitabıınızı ve cevap kâğıdınızı salon görevlilerine teslim etmeyi unutmayıniz.

همراه شما
در مسیر یوس

سوالات یوس دانشگاه ۱۹ مایس



Ondokuz Mayıs UNIVERSITY

INTERNATIONAL STUDENTS' EXAM

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A

**ONDOKUZ MAYIS ÜNİVERSİTESİ
YÖS SINAVI
11 Mayıs 2019**

ADI :

SOYADI :

ADAY NUMARASI :

İMZA : SIRA NO:

ÖNEMLİ AÇIKLAMA

1. Bu soru kitabı *Türkiye'deki belirli üniversitelerde öğrenim görmek isteyen uluslararası öğrencileri* seçme amacıyla hazırlanmış soruları içermektedir.

Bu testlerin soru adetleri şöyledir:

Matematik	40
Temel Öğrenme Becerileri	40

2. Bu soru kitabıının türü A'dır. Kitapçık türünü cevap kağıdınızda ilgili yere aşağıda gösterilen şekilde kodlayınız ve salon görevlisinin de ilgili yere kodladığınız bilgiyi onaylamasını sağlayınız.

Bu kodlamayı cevap kağıdınıza yapmadığınız veya yanlış yaptığınız takdirde, sınavınızın değerlendirilmesi mümkün değildir.

3. Sınavda adaylara toplam 120 dakika süre verilmiştir.

4. Test kitabındaki her sorunun yalnızca bir doğru cevabı vardır. Bir soru için birden fazla cevap yeri işaretlenmişse o soru yanlış cevaplanmış sayılacaktır.
5. Soruların cevaplarını kitapçıkla birlikte verilen cevap kağıdında ayıran yerlere kurşun kalemlle işaretleyiniz. Cevap kağıdını buruşturmayınız, üzerine gereksiz hiçbir işaret koymayınız.
6. Cevap kağıdında soruların cevapları doğru biçimde işaretlenmediğinde optik okuyucu cevabı algılayamayacaktır. Yanlış işaretlemelerden kaynaklanan hatalardan aday sorumludur.
7. Bu sınavın değerlendirilmesi doğru cevap sayısı üzerinden yapılacak, yanlış cevaplar dikkate alınmeyecektir.
8. Sınavda uygulacak diğer kurallar bu kitabıñ arkası kapağında belirtilmiştir.

SORU KİTAPÇIĞI TÜRÜ	
A ●	B ○
Paraf	Paraf

Bu testlerin her hakkı saklıdır. Hangi amaçla olursa olsun, testlerin tamamının veya bir kısmının OMÜ'nün yazılı izni olmadan kopya edilmesi, fotoğrafının çekilmesi, herhangi bir yolla çoğaltılmması, yayınlanması ya da kullanılması yasaktır. Bu yasağa uymayanlar, gerekli cezai sorumluluğu ve testlerin hazırlanmasındaki mali külften peşinen kabullenmiş sayılır.

ONDOKUZ MAYIS UNIVERSITY
YÖS 2019

MATEMATİK

1. $\left(0,2 + \frac{4-0,4}{12}\right) : 0,02 = ?$

- A) 15 B) 25 C) 40 D) 50 E) 75

4. $\begin{cases} 3^a = 2 \\ 3^b = 10 \end{cases} \Rightarrow (0,1\overline{1})^{b-a+1} = ?$

- A) $\frac{25}{9}$ B) $\frac{9}{25}$ C) $\frac{1}{75}$

D) $\frac{1}{225}$ E) $\frac{1}{400}$

2. $a, b, c \in \mathbb{Z}^+$

$a - b = 9$

$b - c = 7$

$\Rightarrow a^2 - (ac + ab) + bc = ?$

- A) 76 B) 98 C) 112
D) 125 E) 144

5. $a = 5, b = 2\sqrt{5}, c = 4\sqrt{2}, d = 3\sqrt{3}$ sayılarının büyükten küçüğe doğru sıralanmış aşağıdakilerden hangisidir?

- A) $a > c > d > b$
B) $c > d > a > b$
C) $b > a > d > c$
D) $c > a > d > b$
E) $d > c > a > b$

3. $a = \frac{1}{4} - \frac{1}{5} \Rightarrow \frac{\frac{1}{16} - \frac{1}{10} + \frac{1}{25} - 1}{1 - \frac{1}{4} + \frac{1}{5}}$

ifadesinin a türünden eşiti aşağıdakilerden hangisidir?

- A) $-a - 1$ B) $a + 1$ C) $2a - 1$
D) $1 - 2a$ E) $1 - a$

6. $|x - 1| \leq 3$
 $4x - 3y - 1 = 0$

koşullarını sağlayan kaç tane y tamsayı değeri vardır?

- A) 5 B) 6 C) 7 D) 8 E) 9

7. $x, y \in \mathbb{Z}^+$ ve $z \in \mathbb{R}$ olsun.

$$\begin{cases} x^2 = z^2 + 5 \\ z^2 = y^2 + 12 \end{cases} \Rightarrow x.y = ?$$

- A) 72 B) 63 C) 54
D) 45 E) 30

8. $\frac{a+b+ab}{2ab} = \frac{5}{7} \Rightarrow \frac{7}{b} + \frac{7}{a} = ?$

- A) 1 B) 2 C) 3 D) $\frac{49}{3}$ E) $\frac{49}{5}$

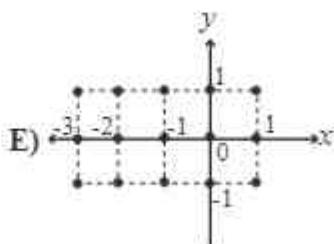
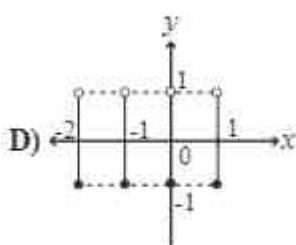
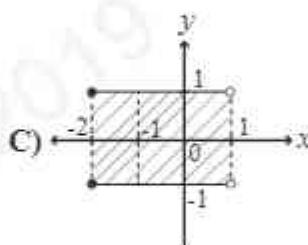
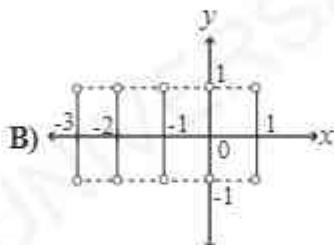
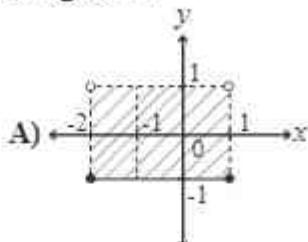
9. $\frac{\frac{2}{x}}{5} - \frac{\frac{1}{3}}{x} = \frac{x}{60}$ olduğuna göre x 'in pozitif değeri nedir?

- A) 1 B) 2 C) 3 D) 4 E) 5

10. $x^2 - |x-5| - 7 = 0$ denklemini sağlayan x değerlerinin toplamı kaçtır?

- A) -5 B) -1 C) 0 D) 1 E) 5

11. $A = \{x \in \mathbb{Z} : -3 < x \leq 1\}$ ve $B = \{x \in \mathbb{R} : -1 \leq x < 1\}$ kümeleri veriliyor. Buna göre, $A \times B$ 'nin grafiği aşağıdakilerden hangisidir?



12. $\frac{|x-5|(x^2-4)}{x^2-3x-4} < 0$ eşitsizliğinin çözüm kümesi aşağıdakilerden hangisidir?

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

13. $a, b \in \mathbb{Z}^+$
 $a! = 132.b!$ $\Rightarrow a+b = ?$

- A) 22 B) 23 C) 24 D) 25 E) 26

14. $n \geq r$ olmak üzere $P(n, r)$ n 'nin r 'li permütasyonlarının sayısıdır. Buna göre $P(15, a) = 14^3 - 14 \Rightarrow a = ?$

- A) 2 B) 3 C) 4 D) 5 E) 6

15. $\binom{n}{4} = 6\binom{n}{3} \Rightarrow n = ?$

- A) 23 B) 24 C) 25 D) 26 E) 27

16. 2019^{2019} sayısının birler basamağındaki rakam kaçtır?

- A) 5 B) 6 C) 7 D) 8 E) 9

17. $P(x) = x^3 + ax^2 - 3x + b$ polinomunun $x^2 + x$ ile bölümünden kalan $2x - 3$ olduğuna göre, $a - b$ kaçtır?

- A) -4 B) -3 C) -2 D) -1 E) 0

18. $f : \mathbb{R} \rightarrow \mathbb{R}, f(x+2+3^x) = x+2$ fonksiyonu veriliyor. Buna göre, $f^{-1}(x)$ fonksiyonu aşağıdakilerden hangisine eşittir?

- A) $3x-2$ B) $2+3^x$ C) $x+2+3^x$
 D) $1+3^{x-2}$ E) $x+3^{x-2}$

19. $f(x) = \begin{cases} -2x+5, & x \leq 1 \\ x-3, & x > 1 \end{cases}$

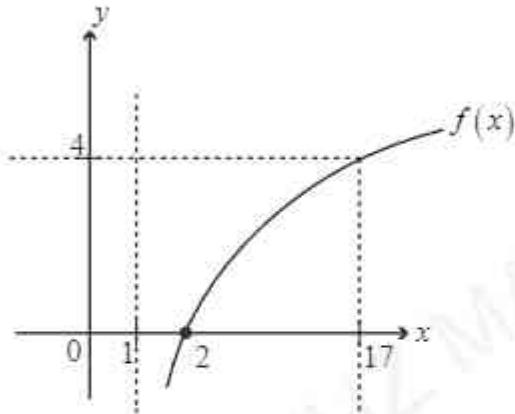
olduğuna göre $f(x) < 3$ eşitsizliğini sağlayan kaç farklı tamsayı değeri vardır?

- A) 4 B) 5 C) 6 D) 7 E) 8

22. $0 < x < \frac{\pi}{2}$, $\tan x = \frac{5}{12}$ olduğuna göre
 $\frac{\sin^3 x - \cos^3 x}{1 + \frac{1}{2} \sin 2x} = ?$

- A) $-\frac{17}{13}$ B) $-\frac{7}{13}$ C) 0
 D) $\frac{7}{13}$ E) $\frac{17}{13}$

20.



Şekilde $f(x) = \log_a(x+b)$ fonksiyonunun grafiği verilmiştir. Buna göre $f\left(\frac{3}{2}\right) = ?$

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

23. $\sqrt{3} \sin x - \cos x = \sqrt{3}$ denkleminin çözüm kümesi aşağıdakilerden hangisidir?

- A) $\left\{ x \in \mathbb{R} \mid x = \frac{\pi}{3} + 2k\pi, k \in \mathbb{Z} \right\}$
 B) $\left\{ x \in \mathbb{R} \mid x = \frac{\pi}{2} + 2k\pi, k \in \mathbb{Z} \right\}$
 C) $\left\{ x \in \mathbb{R} \mid x = \frac{\pi}{3} + 2k\pi, x = \frac{\pi}{2} + 2k\pi, k \in \mathbb{Z} \right\}$
 D) $\left\{ x \in \mathbb{R} \mid x = -\frac{7\pi}{6} + 2k\pi, k \in \mathbb{Z} \right\}$
 E) $\left\{ x \in \mathbb{R} \mid x = \frac{\pi}{2} + 2k\pi, x = -\frac{7\pi}{6} + 2k\pi, k \in \mathbb{Z} \right\}$

21. $f(x) = \sqrt{\log \frac{2-x}{x-6}}$ fonksiyonunun tanım kümesinde kaç tamsayı vardır?

- A) 5 B) 4 C) 3 D) 2 E) 1

24. Genel terimi, $(a_n) = \begin{cases} 2n+1 & , n \equiv 0 \pmod{3} \\ n^2 & , n \equiv 1 \pmod{3} \\ \frac{n+1}{n+2} & , n \equiv 2 \pmod{3} \end{cases}$

olan dizi için $a_9 - a_8 \cdot a_4$ ifadesinin değeri kaçtır?

- A) $-\frac{104}{3}$ B) $\frac{13}{5}$ C) $\frac{23}{5}$
 D) $\frac{167}{5}$ E) $\frac{729}{10}$

25. $\lim_{x \rightarrow 0} \frac{1 - \cos 2x}{x^2 + \tan^2 x} = ?$

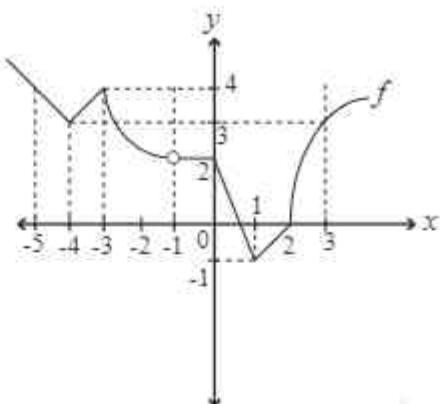
- A) -2 B) -1 C) 0 D) 1 E) 2

26. $f(x) = \begin{cases} \frac{8x+2}{x^2+x-12} & , x < 1 \\ \frac{5x+7}{x^2-3x-10} & , x \geq 1 \end{cases}$

fonksiyonunun sürekli olduğu noktaların toplamı kaçtır?

- A) 0 B) 1 C) 2 D) 3 E) 4

27.



Yukarıdaki şekilde f fonksiyonunun grafiği verilmiştir. Buna göre, $[-5, 3]$ aralığındaki kaç noktada fonksiyon türevsizdir?

- A) 3 B) 4 C) 5 D) 6 E) 7

28. $f(x) = \frac{1}{x} + \frac{1}{2x^3} - \frac{1}{2x^2} - 2x^4$ olduğuna göre $f'(x)$ aşağıdakilerden hangisidir?

- A) $x^2 - x + 3$
 B) $2x^2 + 2x + 3$
 C) $2x^2 - 2x + 3$
 D) $2x^2 + 2x - 3$
 E) $x^2 + x + 3$

29. $f(x)$ fonksiyonu $(-5, -1)$ aralığında pozitif tanımlı ve artandır. Buna göre aşağıdaki fonksiyonların hangisi $(-5, -1)$ aralığında daima azalandır?

- A) $x^2 + f^2(x)$ B) $\frac{f(x)}{x^2}$
 C) $3x^4 - f(x)$ D) $x \cdot f(x)$
 E) $x^2 + f(x)$

30. $f(x) = \begin{cases} x^2, & x < 2 \\ x, & x \geq 2 \end{cases}$ fonksiyonu veriliyor.

Buna göre, $\int_{-1}^3 f(2x) dx$ integralinin değeri kaçtır?

- A) $\frac{32}{3}$ B) $\frac{35}{6}$ C) $\frac{16}{3}$
 D) $\frac{29}{6}$ E) 12

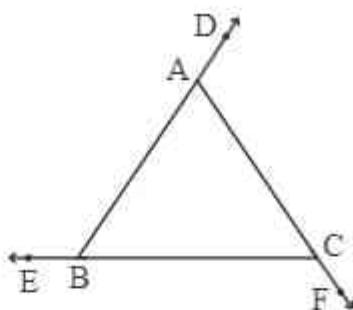
31. $y = |x|$ ve $y = -x^2 + 2$ eğrileri arasında kalan alan kaç br^2 dir?

- A) $\frac{2}{3}$ B) $\frac{5}{3}$ C) $\frac{7}{3}$
 D) $\frac{8}{3}$ E) $\frac{11}{3}$

32. $\int_a^{2b} 2x dx = 3$ ve $\int_0^4 (2b+a) dx = 8$ olduğuna göre a kaçtır?

- A) 0 B) $\frac{1}{4}$ C) $\frac{5}{8}$
 D) $\frac{7}{8}$ E) $\frac{3}{2}$

33.



ABC bir üçgen

$m(\widehat{BAC}) = x$

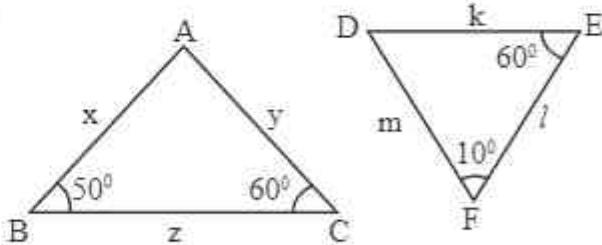
$m(\widehat{ABC}) = y$

$m(\widehat{ACB}) = z$

$$\frac{m(\widehat{CAD}) - m(\widehat{EBA}) + m(\widehat{BCF})}{2} = ?$$

- A) x B) x+y C) z
 D) y E) 2x

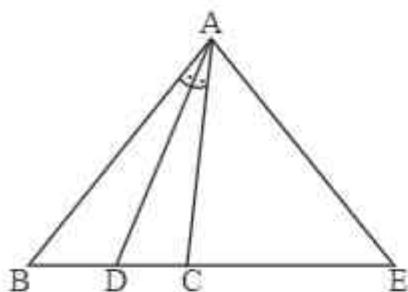
34.



Üçgenlerde verilen açı değerlerine göre, aşağıdakilerden hangisi doğrudur?

- A) $k > x > l$
 B) $m = l + y$
 C) $m + y > x$
 D) $y > l > x$
 E) $l > y > m$

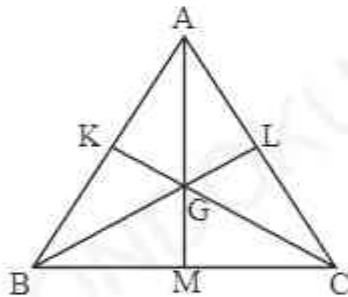
35.



$\triangle ABC$ bir üçgen, $m(\widehat{BAC}) = 60^\circ$, $[AE] \perp [AD]$
 $|BD| = 3\sqrt{3}$ cm
 $|DC| = \sqrt{3}$ cm
 $|CE| = ?$

- A) $\sqrt{3}$ B) $2\sqrt{3}$ C) $3\sqrt{3}$
 D) $4\sqrt{3}$ E) $6\sqrt{3}$

36.



G, $\triangle ABC$ üçgeninin ağırlık merkezi olmak üzere
 $|AM| = V_1$

$$|BL| = V_b$$

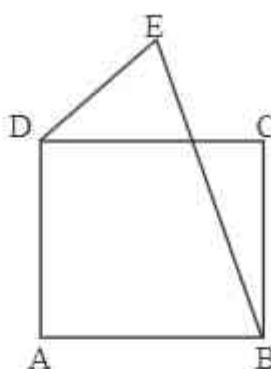
$$|CK| = V_c$$

değerleri bilindiğine göre, $\triangle ABC$ üçgeninin hangi elemanları kesinlikle bulunabilir?

- I- Açıortay uzunluğu
 II- Yükseklik
 III- Çevre

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

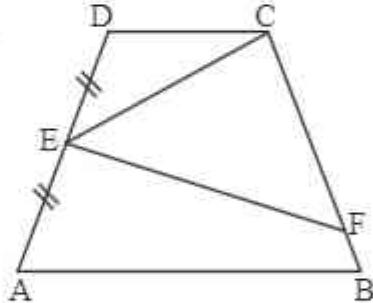
37.



ABCD kare
 $m(\widehat{EDC}) = 15^\circ$
 $|DE| = 2$ cm
 $A(ABCD) = 8$ cm²
 $|EB| = ?$

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

38.



ABCD yamuk

$$|AE| = |ED|$$

$$|EC| = 16$$
 cm

$$|EF| = 30$$
 cm

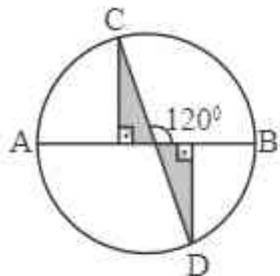
$$|CF| = 34$$
 cm

$$|FB| = 8,5$$
 cm

$$\text{Alan}(ABCD) = ?$$

- A) 240 B) 360 C) 480
 D) 600 E) 720

39.



[AB] ve [CD] çap ve uzunlukları 6 birim olmak üzere, taralı bölgelerin alanları toplamı kaç birim karedir?

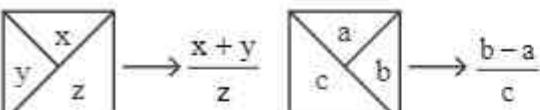
- A) $\frac{9\sqrt{3}}{4}$ B) $3\sqrt{3}$ C) $3\sqrt{6}$
D) 6 E) $6\sqrt{3}$

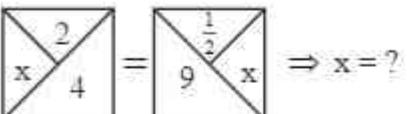
40. $x^2 - 4y^2 - 16x + 64 = 0$ ifadesinin belirlediği iki doğrunun birbirine göre durumu nasıldır?

- A) Dik kesişirler.
B) Orjinde kesişirler.
C) I. bölgede kesişirler.
D) x ekseni üzerinde kesişirler.
E) y ekseni üzerinde kesişirler.

Matematik Testi Bitti.

TEMEL ÖĞRENME BECERİLERİ

1. 

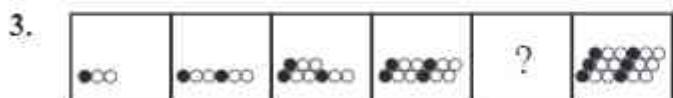


- A) -4 B) $-\frac{16}{13}$ C) 1
 D) $\frac{16}{13}$ E) 4

2. $2,4 - 3,1 - ? - 3,0 = 2,6 - 2,9$

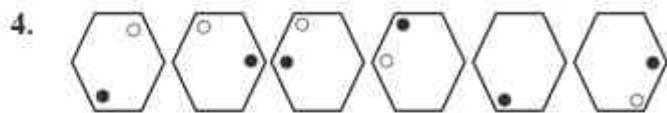
Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 2,5 B) 2,7 C) 2,8
 D) 3,7 E) 3,8

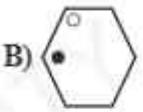
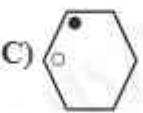
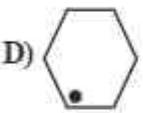
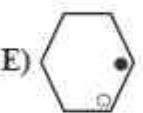


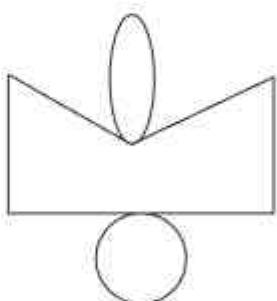
Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 
 B) 
 C) 
 D) 
 E) 

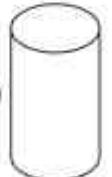
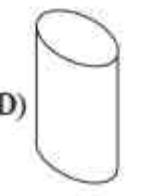


Hangisi örüntüyü bozar?

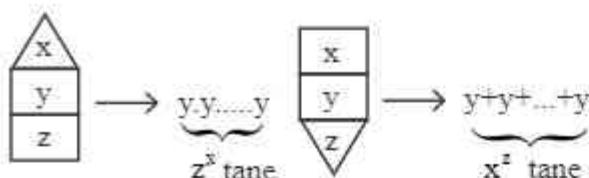
- A) 
 B) 
 C) 
 D) 
 E) 



Yukarıdaki şekil aşağıdakilerin hangisinin açılmış halidir?

- A) 
 B) 
 C) 
 D) 
 E) 

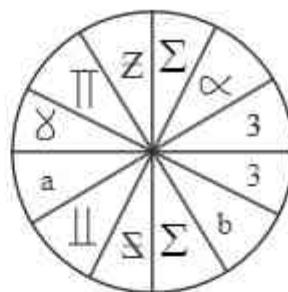
6.



$$\begin{array}{c} 2 \\ \hline 3 \\ 2 \end{array} + \begin{array}{c} 3 \\ \hline 27 \\ 2 \end{array} = \begin{array}{c} 3 \\ \hline 4 \\ a \end{array} \Rightarrow a = ?$$

- A) 0 B) 1 C) 2 D) 3 E) 4

8.



a ve b yerine ne gelmelidir?

A) $\frac{a \rightarrow \gamma}{b \rightarrow \alpha}$ B) $\frac{a \rightarrow \alpha}{b \rightarrow \gamma}$

C) $\frac{a \rightarrow \gamma}{b \rightarrow \alpha}$ D) $\frac{a \rightarrow 3}{b \rightarrow \gamma}$

E) $\frac{a \rightarrow \text{II}}{b \rightarrow \gamma}$

7.

I ve II yerine ne gelmelidir?

A) I \rightarrow II \rightarrow

B) I \rightarrow II \rightarrow

C) I \rightarrow II \rightarrow

D) I \rightarrow II \rightarrow

E) I \rightarrow II \rightarrow

9.

				?
--	--	--	--	---

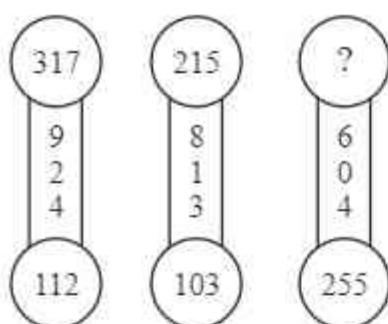
Soru işaretü (?) yerine aşağıdakilerden hangisi gelmelidir?

A) B)

C) D)

E)

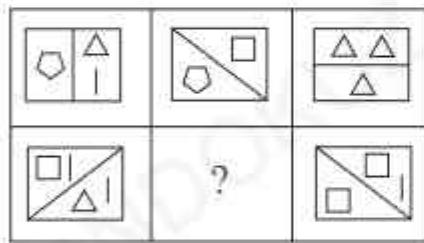
10.



Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 249 B) 221 C) 201
D) 166 E) 151

11.



Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

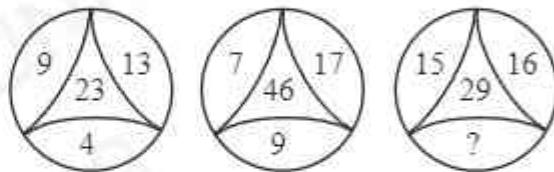
- A)
B)
C)
D)
E)



Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A)
B)
C)
D)
E)

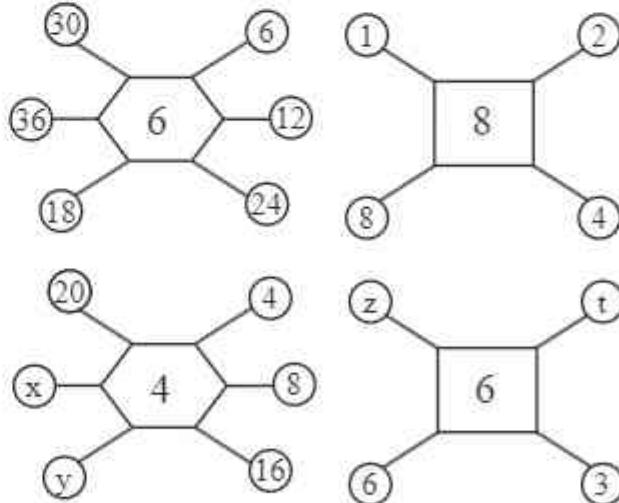
13.



Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 3 B) 8 C) 12
D) 14 E) 18

14.



$$x + y + z + t = ?$$

- A) 36 B) 37 C) 38
D) 39 E) 40

15.

36	5	42	4	55	x
1	7	2	10	y	5

(x,y) ikilisi ne olmalıdır?

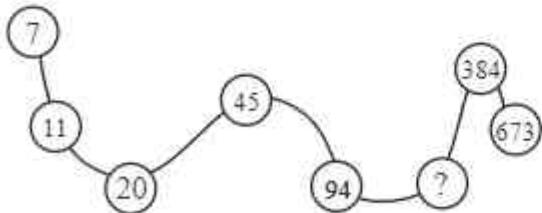
- A) (0,11) B) (2,11) C) (11,0)
 D) (11,2) E) (22,4)

16. $\boxed{\wedge} \boxed{A} \boxed{3} - \boxed{6} \boxed{\triangle} \boxed{B} - ? - \boxed{\square} \boxed{D} \boxed{72}$

Soru işaretü (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) $\boxed{12} \boxed{\square} \boxed{C}$ B) $\boxed{C} \boxed{18} \boxed{\square}$
 C) $\boxed{C} \boxed{12} \boxed{\square}$ D) $\boxed{C} \boxed{36} \boxed{\square}$
 E) $\boxed{18} \boxed{\square} \boxed{C}$

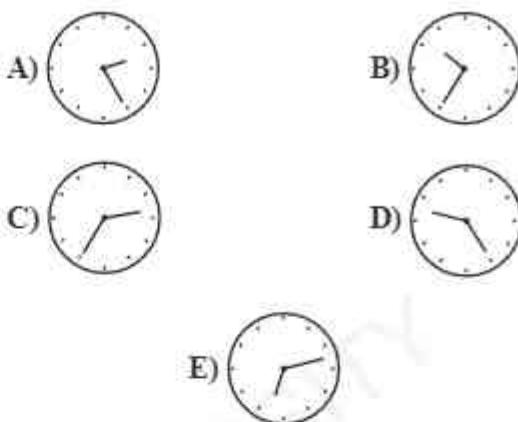
17.



Soru işaretü (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 158 B) 175 C) 194
 D) 205 E) 215

18. Saat 14.35'te saatin aynadaki görüntüsü hangisidir?



19. Bugün 11 Mayıs Cumartesi ve saat 10.00 ise 256 saat sonraki tarih, gün ve saat aşağıdakilerden hangisidir?

- | | Tarih | Gün | Saat |
|----|----------|----------|-------|
| A) | 21 Mayıs | Salı | 14.00 |
| B) | 22 Mayıs | Çarşamba | 02.00 |
| C) | 22 Mayıs | Salı | 02.00 |
| D) | 21 Mayıs | Çarşamba | 14.00 |
| E) | 23 Mayıs | Salı | 02.00 |

20. ABALI → 37616

SUSAM → 26454

BURSA → 64851

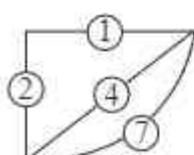
BASIM → 23461

MISAL → ?

Soru işaretü (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 23467 B) 64237
 C) 16732 D) 76432
 E) 46732

21.



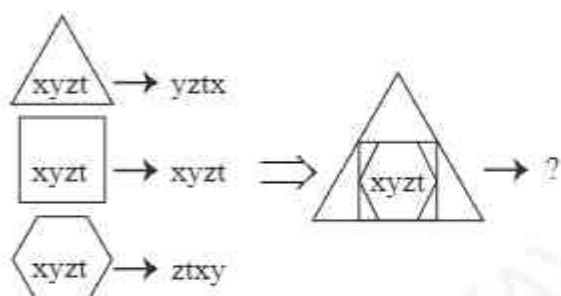
- A) 2147 B) 2417 C) 4721
D) 6861 E) 9561

24. [119,17] [144,18] [x,y] [190,19]

[x,y] ikilisi aşağıdakilerden hangisi olabilir?

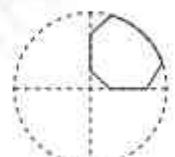
- A) [126,18] B) [136,17]
C) [180,18] D) [171,19]
E) [181,20]

22.



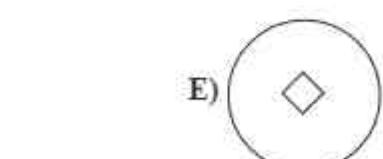
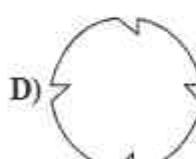
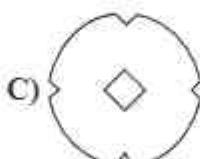
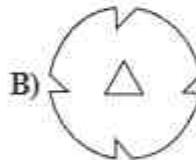
- A) txyz B) txzy C) xyzt
D) xytz E) yztx

25.

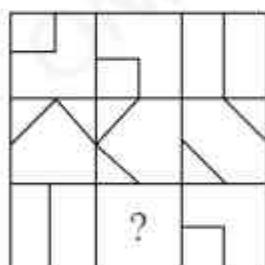


Şekil I Şekil II

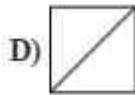
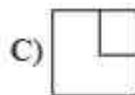
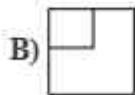
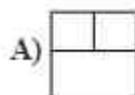
Şekil I'deki daire şeklindeki bir kağıt, Şekil II'deki gibi katlanıp kesiliyor. Kağıt tekrar açıldığında aşağıdakilerden hangisi oluşur?



23.



Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?



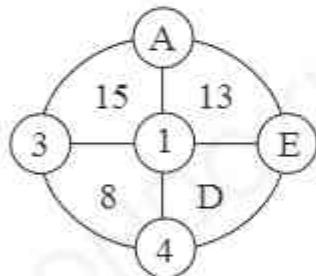
26.

1	2	3
()	..	?!
4	5	6
[]	{ }	*+
7	8	9
<>	^=	#%-

$:){%+ \rightarrow 2221133359966$ oluyorsa
 $}^{*!<}$ hangi sayıya karşılık gelir?

- A) 556233711 B) 5623811
 C) 55622371 D) 56622371
 E) 56223371

27.



$$2A - D + E = ?$$

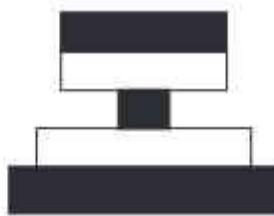
- A) 7 B) 9 C) 14 D) 15 E) 17

28. 2 16 7 343 10 x y

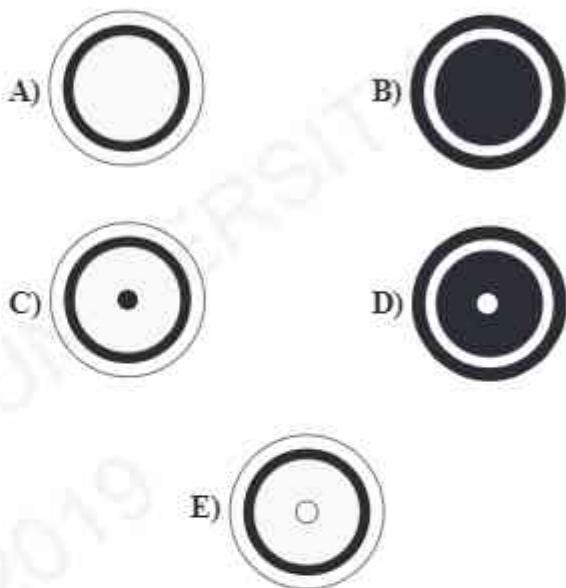
(x,y) aşağıdakilerden hangisidir?

- A) (80,10) B) (90,1)
 C) (90,10) D) (100,1)
 E) (100,10)

29.



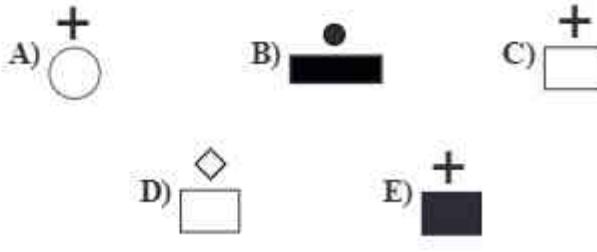
Silindir parçalarından oluşan şeklin üstten görünümü aşağıdakilerden hangisidir?



30.

+	◊	●
●	?	◊
◊	●	+

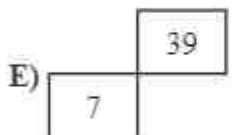
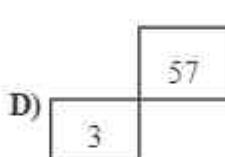
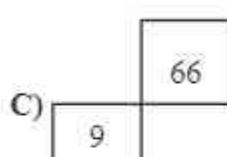
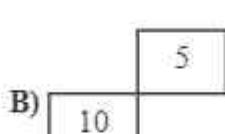
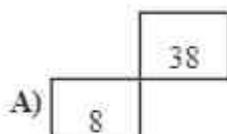
Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?



31.

21	17	36	48	10	25	?
3	8	9	12	1	?	12

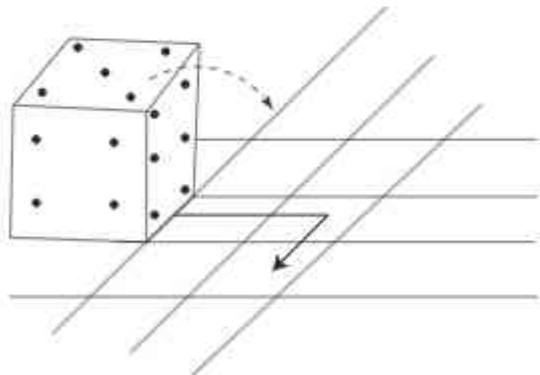
Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

32. $0 \quad , \quad 2 \quad , \quad 2 \quad , \quad 0 \quad , \quad x \quad , \quad y$

(x,y) aşağıdakilerden hangisidir?

- A) $(2,0)$ B) $(1,0)$
 C) $(-1,2)$ D) $(-2,2)$
 E) $(-2,-2)$

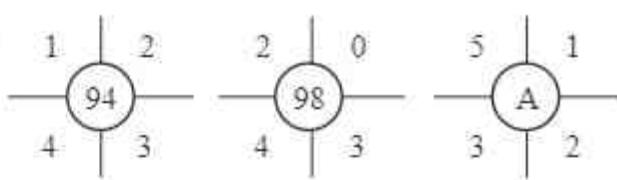
33.



Zarın karşısındaki yüzleri toplamı 7'dir. Zar devrilerek siyah okun olduğu yere getirilirse üste gelen sayı kaç olur?

- A) 1 B) 2 C) 3 D) 4 E) 5

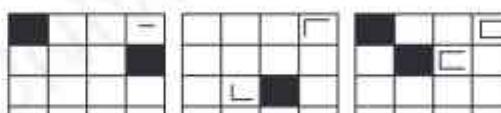
34.



$$A = ?$$

- A) 250 B) 255 C) 256
 D) 257 E) 258

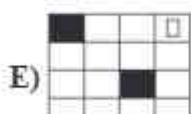
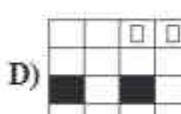
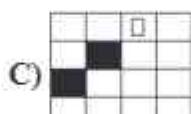
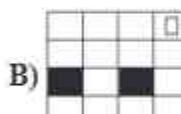
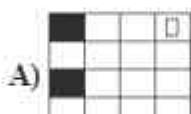
35.



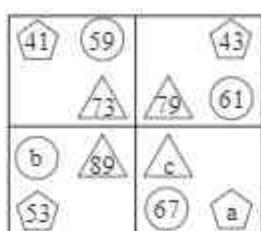
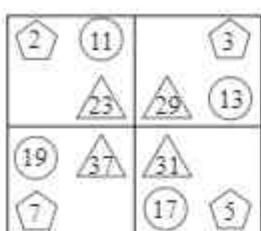
?

IV

IV. şekil yerine aşağıdakilerden hangisi gelmelidir?



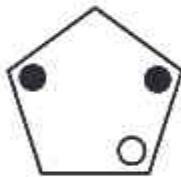
36.



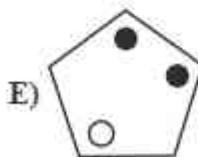
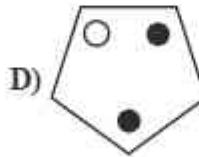
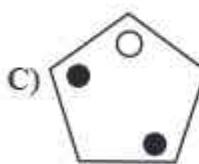
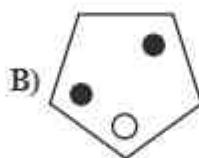
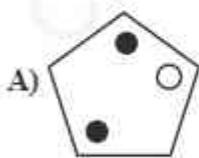
$$a + b + c = ?$$

- A) 191 B) 197 C) 201
D) 211 E) 219

37.



Yukarıdaki düzgün beşgen saat yönünde 288° döndürülürse aşağıdakilerden hangisi elde edilir?



38.

1	6	5
6	2	9
4	7	8

7	1	8
2	3	5
9	6	8

1	4	7
4	?	9
3	6	8

Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) 1 B) 3 C) 5 D) 6 E) 7

39. $A_2B_3C_4 - C_2B_9A_4 - C_2D_3A_4 - A_2D_{11}C_4 = ?$

Soru işaretçi (?) yerine aşağıdakilerden hangisi gelmelidir?

- A) $A_2D_{25}C_4$ B) $C_4E_1A_2$ C) $A_4E_6C_2$
D) $A_2E_7C_4$ E) $A_2E_6C_4$

40.

3	2	1	8	x	2
4	2	6	y	5	9
12	4	3	15	3	5
5	2	10	t	2	4

I

II

$$\frac{x+y}{t} = ?$$

- A) 5 B) 6 C) 7 D) 8 E) 9

ONDOKUZ MAYIS UNIVERSITY
YÖS 2019



A

SINAVDA UYULACAK KURALLAR

1. Çağrı cihazı, telsiz vb. haberleşme araçları ile cep bilgisayar, her türlü bilgisayar özelliği bulunan cihazlarla; silah ve benzeri teçhizatla; müsvedde kâğıdı, defter, kitap, sözlük, sözlük işlevi olan elektronik aygit, hesap cetveli, pergel, açılıçer, cetvel, hesap makinesi vb. araçlarla sınava girmek yasaktır. Bu araçlarla sınava girmiş öğrenciler mutlaka Salon Sınav Tutanlığına yazılacak, bu öğrencilerin sınavları geçersiz sayılacaktır.
2. Sınavda adaylara **120 dakika** süre verilmiştir. Sınavın ilk 30 dakikasından sonra hiçbir şekilde adaylar sınava alınmayacaktır. Sınavın başlamasını izleyen ilk 40 ve son 5 dakikası içinde adayların sınavdan çıkışması kesinlikle yasaktır. **Sınav evrakını teslim ederek salonu terk eden aday, her ne sebeple olursa olsun, tekrar sınava devam ettilmeyecektir.** Cevaplama süre bitmeden tamamlarsanız, cevap kâğıınızı ve soru kitabıınızı salon görevlilerine teslim ederek salonu terk edebilirsiniz. Sınav süresinin bittiği ilan edilip cevap kâğıtları ve soru kitapçıkları salon görevlileri tarafından toplanıncaya kadar yerlerinizde kalınız.
3. Sınav süresince görevlilerle konuşmak ve soru sormak yasaktır. Aynı şekilde görevlilerin de adaylarla yakından ve alçak sesle konuşmaları, ayrıca adayların birbirinden kalemleri, silgi vb. şeyleri istemeleri **kesinlikle yasaktır.**
4. Sınav sırasında kopya çeken, çekmeye kalkışan, kopya veren, kopya çekilmesine yardım edenlerin kimlikleri, Salon Sınav Tutanlığına yazılacak ve bu adayların sınavları geçersiz sayılacaktır. Görevliler kopya çekmeye veya vermeye kalkışanları uyarmak zorunda değildir, sorumluluk size aittir. Adayların test sorularına verdikleri cevapların dağılımları bilgi işlem yöntemleriyle inceleneceler, bu incelemelerden elde edilen bulgular bireysel veya toplu olarak kopya girişiminde bulunulduğunu gösterirse, kopya eylemine katılan adayların sınavı iptal edilecektir. **Cevap kâğıdınızı başkaları tarafından görülmeyecek şekilde tutmanız gerekmektedir.** Bu durum sizin için son derece önemlidir. Sınav görevlileri, sınavın kurallara uygun biçimde yapılmadığını veya toplu kopya girişiminde bulunulduğunu raporunda bildirdiği takdirde, OMÜ takdir hakkını kullanarak sınavın tümünü iptal etme hakkına sahiptir.
5. Adaylar, görevlilerin her türlü uyarısını dikkate almak zorundadır. Görevliler, gerektiğinde oturduğunuz yerleri de değiştirebilir. Sınavınızın geçerli sayılması, her şeyden önce sınav kurallarına uymanızı bağlıdır. Kurallara aynen davranışta bulunanların ve yapılacak uyarıları dikkate almayanların kimlikleri tutanağa yazılacak ve sınavları geçersiz sayılacaktır.
6. Cevap kâğıdında ilgili alanları doldurmanız gerekmektedir. **Cevap kâğıdına** yazılacak her türlü yazıda ve yapılacak bütün işaretlemelerde **kurşun kalem** kullanılacaktır. Tükenmez kalem ve dolma kalem kesinlikle kullanılmayacaktır. Cevapların **cevap kâğıdına** işaretlenmiş olması gereklidir. Soru kitabığınıza işaretlenen cevaplar geçerli değildir.
7. Soru kitabıınızı alır almadığınız, sayfaların eksik olup olmadığını, **kitapçıkta** basım hatalarının bulunup bulunmadığını kontrol ediniz. Soru kitabılarınızın sayfası eksik veya basımı hatalı ise değiştirilmesi için derhal Salon Başkanına başvurunuz. Soru kitabılığında her sayfanın tepsisinde basılı bulunan soru kitabı türünün, kitabığın ön kapağında basılı soru kitabı türü ile aynı olup olmadığını kontrol ediniz. Farklı olması durumunda Salon Başkanından yeni bir soru kitabı isteyiniz. Soru kitabılarınızın türünün değişik olduğunu daha sonra fark ederseniz, size o zamana kadar cevaplama yaptığınız türden, hatalı bir soru kitabı verilmesi için Salon Başkanına başvurunuz. **Cevap kâğıdınızda, size verilen soru kitabıının türünü "Soru Kitabı Türü" alanında ilgili yuvarlığı doldurarak belirtiniz.** Cevap kâğıdınızda işaretlediğiniz Soru Kitabı Türü salon görevlileri tarafından sınav öncesi kontrol edilerek **Murekkepli Kalemlle** paraflanacaktır. Salon görevlileri tarafından cevap kâğıdınızda ilgili alanın işaretlenmemesi durumunda cevap kâğıdınız değerlendirilemeyecektir. Sizin ve salon görevlilerinin işaretledikleri soru kitabı türü arasında fark olması halinde salon görevlilerinin işaretlediği dikkate alınacaktır.
8. Cevaplama geçmeden önce size verilecek soru kitabı üzerinde ayrılan yere adınızı, soyadınızı ve Aday Numaranızı yazıp imzalayınız. Sınav sonunda soru kitapçıkları ile cevap kâğıtları toplanacak ve tek tek incelenecektir. Soru kitabılarınızın sayfalarının eksik bulunması durumunda sınavınız geçersiz sayılacaktır.
9. Soru kitapçılarının sayfalarındaki boş yerleri müsvedde için kullanabilirsiniz.
10. Sınav süresince, görevliler dahil, salonda kimse sigara, pipo, puro vb. şeyleri içmeyecektir.
11. Soruları veya bu sorulara verdığınız cevapları aynı bir kâğıda yazıp bu kâğıdı dışarı çıkarmanız kesinlikle yasaktır.
12. Sınav salonundan ayrılmadan önce, soru kitabıınızı ve cevap kâğıdınızı salon görevlilerine teslim etmeyi unutmayıniz.