

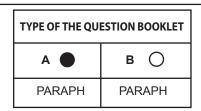
2018 INTERNATIONAL STUDENT EXAM (OMÜ YÖS)



ONDOKUZ MAYIS UNIVERSITY INTERNATIONAL STUDENT EXAM May 12, 2018

NAME	:
SURNAME	:
ID NUMBER	:
SIGNATURE	: SEAT NUMBER:

IMPORTANT INFORMATION 1. This booklet includes test questions for 4. Each question has only one correct answer. international students who wish to study in Multiple selections will be considered as certain Turkish universities. incorrect. 5. The answers to the questions given in the The number of questions are as follows: booklet should be marked by pencil on the answer sheet provided with this booklet. Please **Mathematics** 40 use a pencil. Do not fold the answer sheet and do **Basic Learning Skills** 40 not write anything not required on it. 6. Inappropriate markings on the answer sheet 2. This is an "A" type booklet. Please mark the type will not be read by the optical reader. The of your booklet on the answer sheet as shown candidate is responsible for the mistakes below, and make sure it has been confirmed by incurred by inappropriate markings. the exam supervisor. 7. Only correct answers will be calculated in this If you do not code the booklet type correctly exam. You will not lose any points for incorrect on the answer sheet, your exam will be answers. invalid. 8. Further information about the examination rules 3. You have **120 minutes** to complete the exam. are printed on the back cover of this booklet.



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MATHEMATICS

 1.
$$A = 4831.4836$$

 $B = 4829.4838$ $\Rightarrow A - B = ?
 4. A, B, C, D are non-empty sets.
If $A = B = C = D$ then,
what is $[[A \ominus B] \cap (C \cup B]] \cup D ?$

 A) 7
 B) 14
 C) 28
 D) 34
 E) 35

 2. $2 - \frac{1}{2 - \frac{1}{2 - \frac{1}{x}}} = ?
 A) 1 + $\frac{x - 3}{3x - 2}$
 B) $1 - \frac{x + 3}{3x - 2}$
 A) C
 B) \emptyset
 C) $B \cup D$

 A) $1 + \frac{x - 3}{3x - 2}$
 B) $1 - \frac{x + 3}{3x - 2}$
 A) -3
 B) -1
 C) 0

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

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

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

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

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

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

 A) $2^{1/2} + 7!$
 B) $63! - 3^{10}$
 C) $0! + 5^{10}$
 A) $(1, [3]] \subset A$
 B) $\{1\} \in A$

 D) $4^{1/2} - 8^{1/2} + 8^{1/2}$
 D)$$

A

3

7. If
$$b < 0 < a$$
 then,
what is $\sqrt{(3a-b)^2} - \sqrt{(b-a)^2} = ?$
A) $2a = B$, $4a = C$, $2a - 2b$
D) $4a - 2b = E$, $-4a + 2b$
8. Let x, y be positive integers and
 $P = \frac{x}{y+2}$
 $R = \frac{x}{y}$.
 $S = \frac{x+3}{y}$. Which of the following or-
dering is true?
 $S = \frac{x+3}{y}$. Which of the following or-
dering is true?
 $S = \frac{x+3}{y}$. Which one of the following is the solution set
of $\frac{(x^2 + x + 4)(x-1)}{x^2 - 4} < 0$?
A) $(-\infty, -2) \cup (2, \infty)$ B) $(2, \infty)$
 $E) (-2,1) \cup (2, \infty)$
10. How many integers x exist satisfying
 $|x-2018 - x|$
 $|x-1234| = x-1234 ?$
A) 781 B) 782 C) 783
D) 784 E) 785
11. The remainder of the division of the
polynomial $P(x) = ax^1 - 2ax^2 + 5x - 2$ by
 $(x + 1)$ is -4 . What is the remainder of the
division of $P(x)$ by $(x-1)?$
A) 6 B) 2 C) 0
D) -2 E) -6
D) -2 E) -6
D) -2 E) -6
D) $\frac{5}{4}$ B) $-\frac{5}{2}$ C) -5
D) $\frac{5}{4}$ E) $\frac{5}{2}$

A

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Α

13.
$$\frac{x}{z+5} = \frac{y}{x+1} = \frac{z}{y-2} = \frac{3}{5}$$

 $\Rightarrow x+y+z=7$
A) 6 B) 10 C) 12 D) 16 E) 20
14. $x + \frac{1}{y} = 3, y + \frac{1}{x} = 5$
 $\Rightarrow \frac{x-3y}{3x+y} = ?$
A) $-\frac{6}{7}$ B) $-\frac{2}{9}$ C) $-\frac{1}{2}$
D) $\frac{2}{9}$ F) $\frac{6}{7}$
15. Let *a*, *b* be integers and
 $\frac{a^2+5a-b^2+5b=14}{a+b=2}$
A) -1 B) 0 C) 1 D) 2 E) 3
18. If $z = \frac{9}{2+i} = \frac{33}{4-3i}$ then, what is $im(z)$?
A) $-\frac{9}{25}$ B) $\frac{54}{25}$ C) $-\frac{42}{25}$

Mathematics

19. What is the smallest three digit number 22. $0^{\circ} < x < 90^{\circ}$. divisible by $\frac{2}{3}, \frac{7}{9}, \frac{4}{13}$ without a remainder? $\frac{2.\cos 22^{\circ}.\cos 68^{\circ} - 2.\sin 22^{\circ}.\sin 68^{\circ}}{-\sin 21^{\circ}.\cos 69^{\circ} - \sin 69^{\circ}.\cos 21^{\circ}} = \frac{\tan x - \tan 27^{\circ}}{1 + \tan x.\tan 27^{\circ}}$ $\frac{1}{1 + \tan x \tan 27^{\circ}}$ **A)** 102 **B)** 108 **C)** 112 $\Rightarrow x = ?$ **D)** 120 **E)** 124 A) 9° **B)** 27⁰ **C)** 45⁰ **D)** 54⁰ **E)** 81⁰ 20. If $f : \mathbb{R} \to \mathbb{R}$, $f(x) = x^2 - 4$ then, which one of the following is true? A) $f^{-1}(x) = \sqrt{x+4}$ 23. If the first three terms of an arithmetic **B**) $f^{-1}(x) = \sqrt{x-4}$ sequence are a-1, 2a+5, 5a+1, respectively, C) $f^{-1}(x) = \sqrt{x} + 4$ then what is the fifth term of this sequence? **D**) $f^{-1}(x) = \sqrt{x} - 4$ A) 39 **B)** 42 **C)** 46 E) The inverse of the function f does not exist. **D)** 48 **E)** 52 21. $f: \mathbb{R} \to \mathbb{R}, g: \mathbb{R} \to \mathbb{R}$ $f(x+1) = -2x^4 - 8x^3 - 12x^2 - 8x - 2,$ 24. If the first three terms of a geometric $g(x) = x^3 - 8 \Longrightarrow gof(-1) = ?$ sequence are (x-3), (2x-3), (4x+3), respectively, what is the eighth term of this sequence? **A)** 16 **B)** 7 **C)** 0 **A)** 3⁴ **B)** 3⁵ **C)** 3⁶ **D**) -7 **E)** –16 **D**) 3⁷ **E)** 3⁸

Д

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25.
$$\log_2 x = 5$$
, $\log_{\sqrt{3}} y = 4 \implies x + 2y = ?$

A) 50 B) 41 C) 22

28.
$$f:[3,\infty) \to [-4,\infty)$$

 $f(x) = x^2 - 5x + 2 \implies (f^{-1})'(-4) = ?$

D) 1 **E**) 2

26. Let
$$f(x) = \begin{cases} \frac{3x}{x^2 - 16} , & x \le 2\\ \frac{x - 2}{x^2 - 5x + 6} , & x > 2 \end{cases}$$
.

29.
$$f(x) = \sin 3x - \tan 2x$$
$$\Rightarrow \lim_{h \to 0} \frac{f\left(\frac{\pi}{6} + h\right) - f\left(\frac{\pi}{6}\right)}{h} = ?$$

How many points of discontinuity exist for
$$f(x)$$
?

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

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

D) $-\frac{4}{3}$ **E)** -1

27.
$$\lim_{x \to \frac{\pi}{2}} \frac{\cos x - \sin 4x}{\cot x} = ?$$

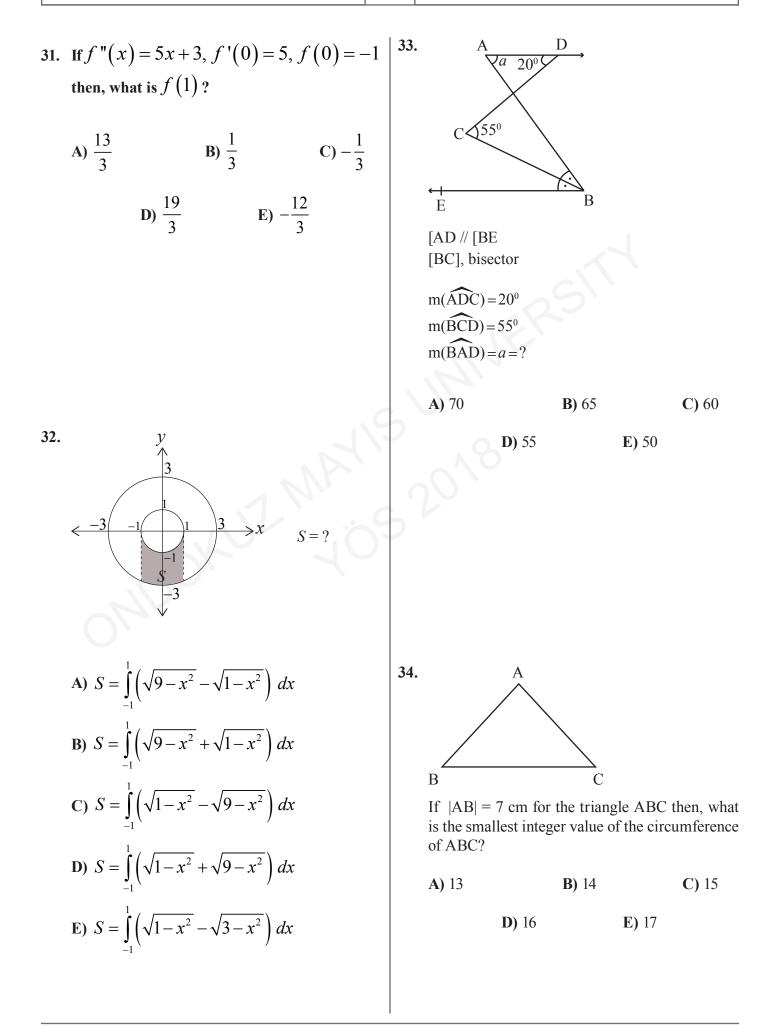
A) -5 B) -3 C) 1
D) 3 E) 5
A)
$$\frac{1}{2} \sqrt{x \sqrt{x^3 \sqrt{x^5}}} \, dx = ?$$

A)
$$\frac{15}{4} B) \frac{8}{23} C) \frac{11}{4} B = \frac{15}{8} C$$

A

Mathematics

Mathematics



Α

8

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35.

A B C

ABC triangle, $m(\hat{A}) > 90^{\circ}$ and |BC| = a cm |AC| = b cm |AB| = c cmWhich one of the following is always true?

A)
$$a^2 < b^2 + c^2$$
 B) $\frac{a}{2} > b + c$

C)
$$a > 1$$
, $b > 0$, $c > 0$ D) $b > c$

E)
$$\frac{b+c}{2} < a$$

G is the center of gravity of the triangle ABC. $|AB| = 10\sqrt{2}$ cm |GM| = 8 cm

|BG| = 6 cm

Α

37.

38.

|GC| = ?

A) 6 **B)** 8 **C)** $4\sqrt{6}$

D) $6\sqrt{6}$ **E**) $8\sqrt{6}$

B x C

BAC right triangle $m(\widehat{DBC}) = 15^{0}$ $m(\widehat{ACB}) = 30^{0}$ $|DC| = 4(\sqrt{3} - 1) \text{ cm}$ |BC| = x = ?A) 10
B) 8

ABCD quadrangle E, F, G, H midpoints |AC| = 17 cm|DB| = 13 cmWhat is the circumference of EFGH?

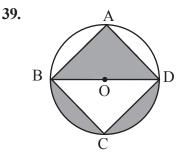
 A) 15
 B) 20
 C) 24

D) 30 **E)** 32



C) 6

E) 2



O is the center of the circle, the vertices of the rectangle ABCD are on the circle.

Δ

 $|\mathrm{DC}| = 12 \mathrm{~cm}$

|AD| = 16 cm

What is the sum of the shaded areas?

A) 24π **B)** 32π **C)** 50π

E) 60π

D) 56π

40. Which one of the following is the equation of the line passing through the intersection of the lines

 $d_1 \dots 17x + 13y - 4 = 0$

 d_2 ... 5x - 31y + 2 = 0

and the origin?

A) 11x = 9y **B)** 22x = 49y

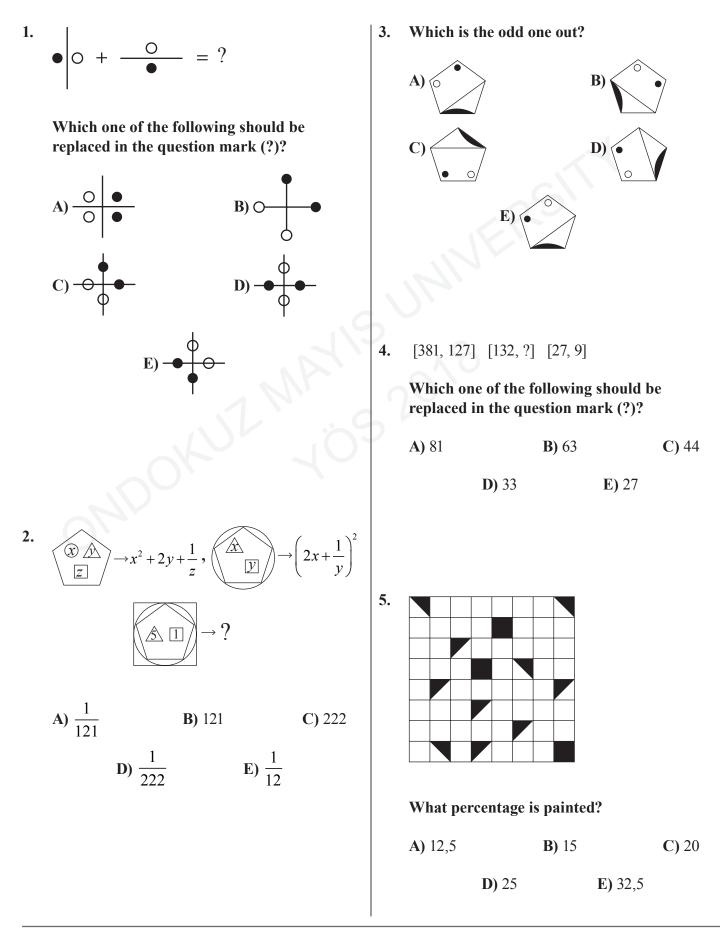
C) 3x = 11y **D)** 27x = 49y

E) 11x = 49y

Mathematics Test is completed.

BASIC LEARNING SKILLS

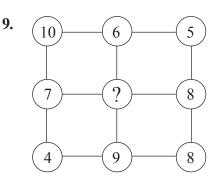
Δ



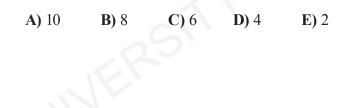
Which one of the following should be replaced in the question mark (?)?

A) 18 B) 25 C) 27

D) 30 **E**) 33



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

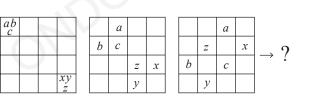


7. (3) 1 1 5 4 10 5 2 2 4 2 3

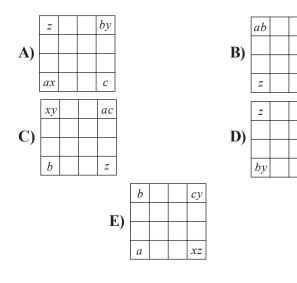
Which one of the following should be replaced in the question mark (?)?

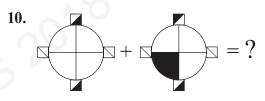
A) 4 **B)** 5 **C)** 6 **D)** 7 **E)** 8

8.

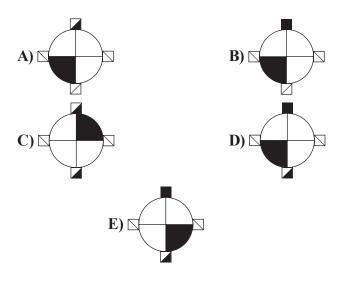


Which one of the following should be replaced in the question mark (?)?





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

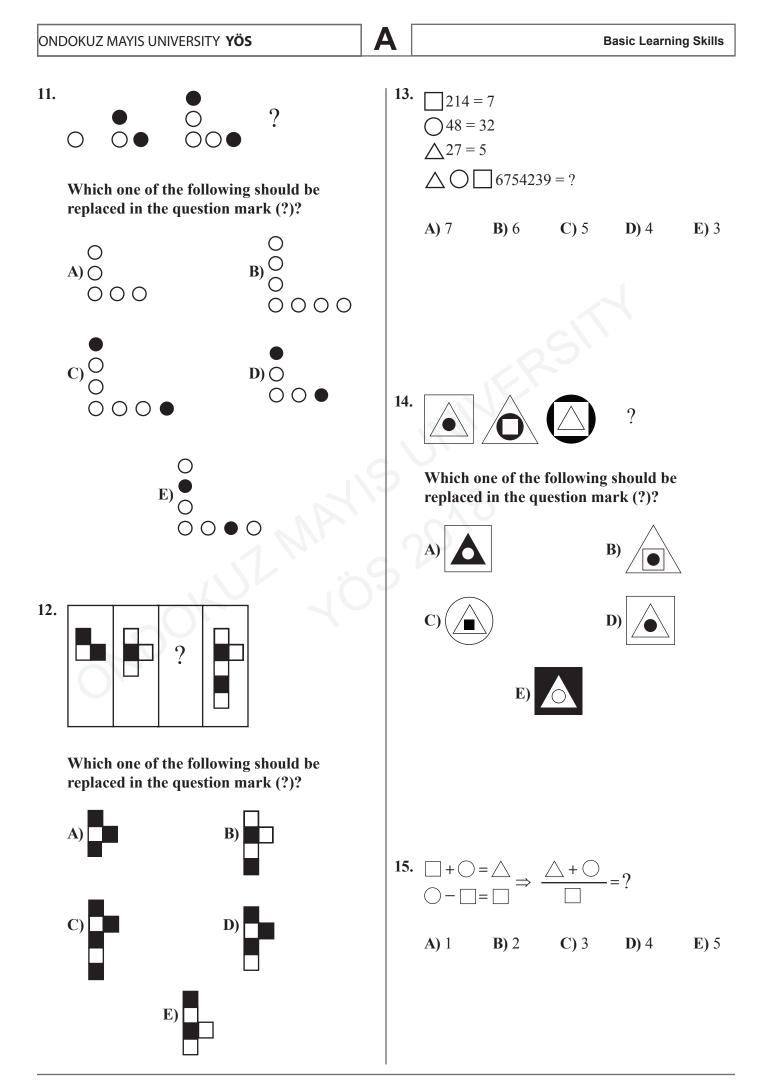


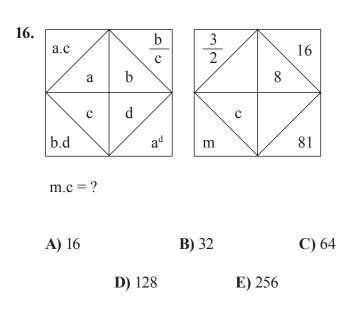
С

xy

ax

С



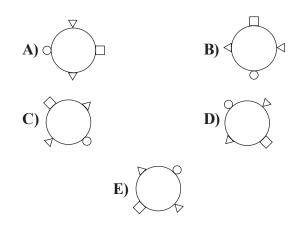


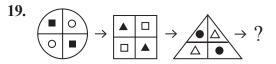
17.	=	?
		++
	++++	+++

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

A)	B) ##	C) +
D) —	E)	#

18. Which is the odd one out?

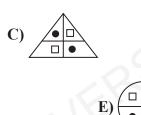


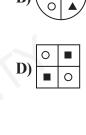


Α

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







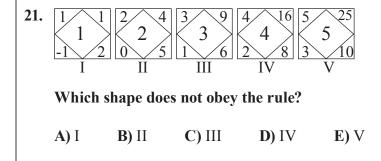
20.	342178 →	871432 -	\rightarrow 234781	\rightarrow 187324	\rightarrow ?
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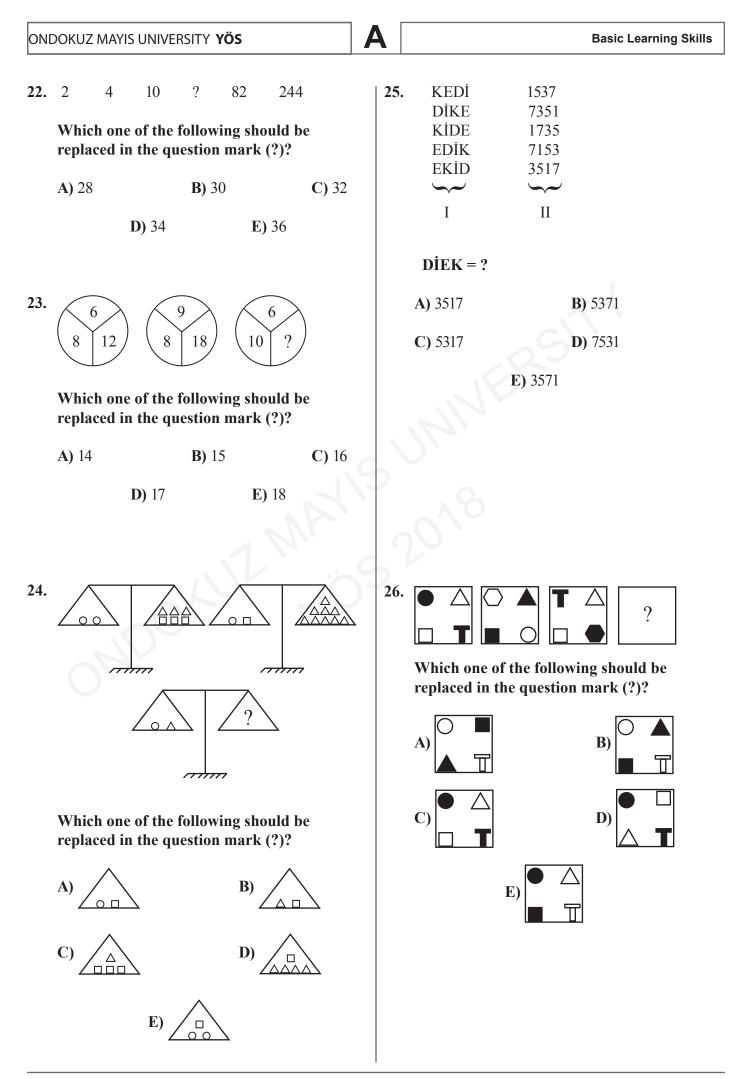
Which one of the following should be replaced in the question mark (?)?

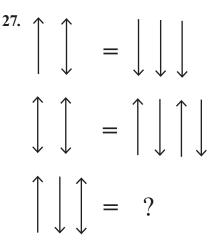
A) 423817	B) 234871
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C) 781243 **D)** 817432

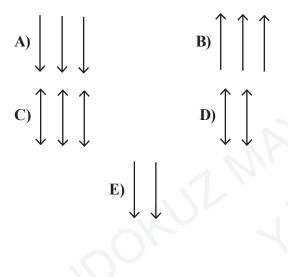
E) 328714







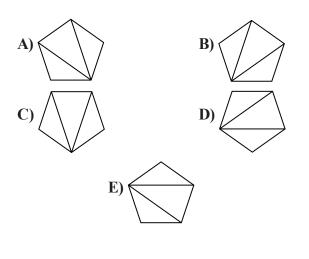
Which one of the following should be replaced in the question mark (?)?

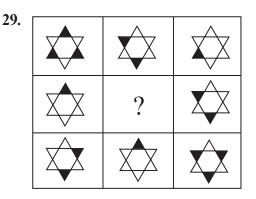




 \Rightarrow ?

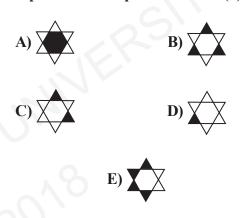
The above pentagon is rotated 108^o clockwise. Which one of the following is obtained?

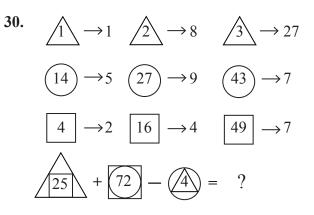




Α

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

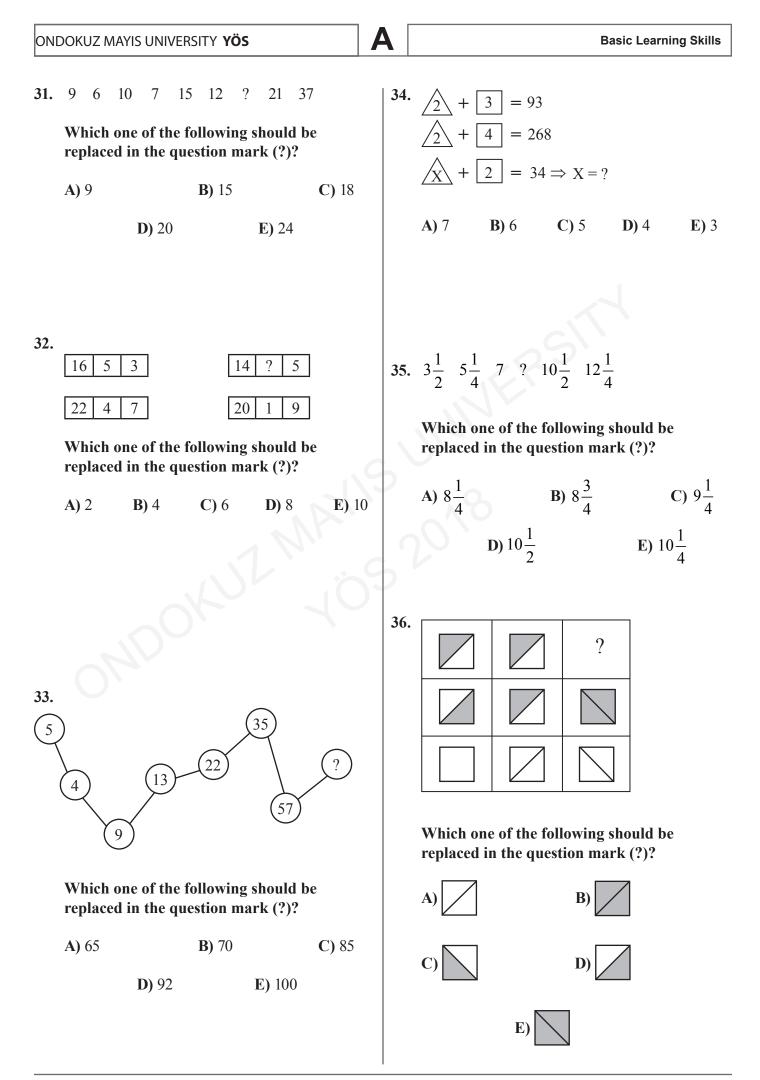


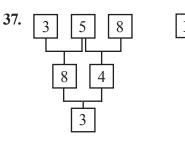


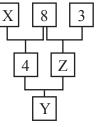
Which one of the following should be replaced in the question mark (?)?

A) 118	B) 128	C) 132

D) 138 **E**) 142



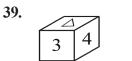




C) 8

$$X + Y + Z = ?$$

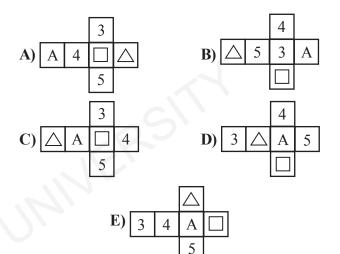
A) 5 **B)** 6

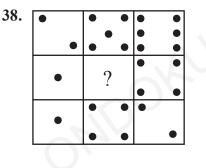


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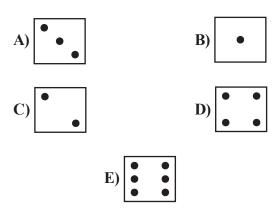


A cube is presented in different positions. Which one of the following is the open form of this cube?





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



40.

						_
11	20	19	34	?	25	
5	2	9	4	5	1	

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

A) 21	B) 19	C) 15	D) 13	E) 11
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ONDORUZ NAVIS UNIVERSITY



2018 INTERNATIONAL STUDENT EXAM (OMÜ YÖS)



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 then **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 reenter 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, attemps 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 inviligators. 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 shoul 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.

Samsun, Turkey

OMU YOS 2022/2023

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TO BE HELD IN NIGERIA

ANNOUNCEMENT! ANNOUNCEMENT! ANNOUNCEMENT!



We are delighted to tell Nigerians OMU YOS is to be held in Nigeria this coming year..



OMÜ-YÖS was first held on May 27, 2012, in 16 countries, and 21 exam centers, in Turkish and English and was attended by 709 candidates. There has been a significant increase in the number of countries and centers where the exam is held and the number of exam languages and attendee students. The exam of 2016 was held in 18 countries, 28 exam centers, and 6 languages (Turkish, English, Russian, Arabic, French, and German) in total. The preliminary works for OMÜ-YÖS 2017 to be conducted in 3 continents and various countries have started.

A.S.M CONSULTANCY IS TO ORGANIZE OMU YOS IN NIGERIA.

ALONG WITH OMU UZEM, YOS IS PLANNED TO BE ORGANIZED IN KANO NIGERIA, NEXT YEAR IN MAY..

The number of universities accepting OMÜ-YÖS (Entrance Examination for International Students) is growing each passing day. OMÜ-YÖS is taken by international students wishing to study at Ondokuz Mayıs University, and the exam's result is accepted by 72 states, 47 private universities, and 119 universities in total. This exam is carried out under the coordinatorship of OMU International Relations Office jointly with OMU Distance Education Center (UZEM). The number of universities accepting OMÜ-YÖS (Entrance Examination for International Students) is growing each passing day. OMÜ-YÖS is taken by international students wishing to study at Ondokuz Mayıs University,



PRIVATE UNIVERSITIES

APPLY TO OMU YOS EXAM TO GET ADMISSION TO MORE THAN 90 UNIVERSITIES IN TURKEY. APPLY TO OMU YOS EXAM TO GET ADMISSION TO MORE THAN 90 UNIVERSITIES IN TURKEY.APPLY TO OMU YOS EXAM TO GET ADMISSION TO MORE THAN 90 UNIVERSITIES IN TURKEY.APPLY TO OMU YOS EXAM TO GET ADMISSION TO MORE THAN 90 UNIVERSITIES IN TURKEY.APPLY TO OMU YOS EXAM TO GET ADMISSION TO MORE THAN 90 UNIVERSITIES IN TURKEY.

A.S.M Consultancy is to organize the YOS exam (JAMB) in Nigeria next year. The exam takes place during May, successful students will be admitted to their university of choice. There are more than 80 public and 50 private universities that accept the OMU YOS exam. We need 100 candidates in order to bring the exam to Nigeria. Apply here to actualize your dream of studying abroad.