

## SINAV İÇERİĞİ

Uluslararası Öğrenci Sınavı, 40 Genel Yetenek 30 Matematik, 10 Geometri sorusunu içeren Temel Öğrenme Becerileri Testinden oluşmaktadır.

4 yanlış cevap bir doğru cevabı götürür.

Sınav süresi 90 dakikadır.

Sınav soruları aşağıdaki konulardan oluşmaktadır.

### TEMEL ÖĞRENME BECERİLERİ SORULARI

Kelimelerle ya da sayılarla şifreleme

Eşitlik ya da tablo kullanarak işlem sonucunu bulma

Şekil örüntüsü

Birleşen şekilleri tamamlama

Şekillerde döndürme

Farklı şekli bulma

Şekil birleştirme

Küp, nokta, çizgi sayma

### MATEMATİK

Sayılar

Bölünebilme

Dört İşlem Problemleri

Rasyonel ve ondalık kesir sayılarıyla işlemler

Üslü ve köklü sayılar

Özdeşlikler ve çarpanlara ayırma

Fonksiyonlar

Polinomlar

İkinci dereceden bir bilinmeyenli denklemler

İkinci dereceden denklemlerin grafik çözümleri

Birinci ve ikinci dereceden eşitsizlik çözümleri

Olasılık

Mutlak değer

Trigonometri

Logaritma

Limit

Türev

İntegral

### GEOMETRİ

Açılar

Açı Kenar İlişkisi

Özel Üçgenler

Eşlik ve Benzerlik

Çokgenler ve özellikleri

Çokgenlerde Alan

Çemberde açı, teğet, kiriş ve yay uzunluğu

Dairede alan

Cisimlerde alan ve hacim

Doğrunun analitik incelenmesi

## EXAM CONTENT

International Students Exam is composed of Basic Learning Skills Test with 40 General Ability questions, 30 Mathematics and 10 Geometry questions.

1 correct answer is deducted from your final score for every 4 wrong answers.

The duration of the exam is 90 minutes.

Exam is composed of questions within the subjects given below.

### IQ QUESTIONS

Coding with Words/ Figures/ Numbers

Operations with equations and tables

Completing Figure Series

Completing combining figures

Rotating the figure

Finding the different figure

Combining figures

Cubes/Lines

### MATHEMATICS

#### Numbers

Divisibility

Problems

Rational and Decimal Numbers

Exponential and Root Numbers

Identities and Factorization

Functions

Polynoms

Equations

Inequalities

Probabilities

Absolute Value

Trigonometry

Logarithm

Limit

Derivative

Integral

### GEOMETRY

Angles

Angle - Edge Relation

Custom Triangles

Equalities and Similarities

Polygons and Features

Area in Polygons

Angle, tangent, chord and arc length in circles

Triangle (Angles, Angle Bisector, Median, Area)

Area in Circle

Prism and Pyramids

Area and Volume in Solids

Analytical Analysis of Lines



## ÖRNEK SORULAR/SAMPLES

.... ve ..... Sorularda, I. gruptaki sözcüklerin harfleri birer rakamla gösterilerek II. gruptaki sayılar elde edilmiştir. Soru işaretiyle belirtilen sözcüğün hangi sayıyla gösterildiğini bulunuz.

In questions ... and ....., the numbers in group II stand for the words in group I, when each letter has been coded with a specific numeral. Find the number which corresponds to the word indicated by the question mark.

1)

I. II.

İLKEİ = 97417

HARBI = 63529

BİTKİ = 29849

KOBRA = 40253

TEKİL = ?

A) 89147 B) 49316 C) 81497

D) 81495 E) 87914

..... ve ..... soruları aşağıdaki tabloya göre cevaplayınız.

Answer questions .... and ... in accordance with the table given below.

⊗	a	b	c	d	e
a	a	b	c	d	e
b	b	c	d	e	a
c	c	d	e	a	b
d	d	e	a	b	c
e	e	a	b	c	d

Tabloda ⊗ işleminin görevi verilmiştir.

The operation of ⊗ is established in the table.

**Örnekler (Examples):**

a ⊗ b = b

b ⊗ d = e

2)

(c ⊗ d) ⊗ (e ⊗ a) = ?

A) a B) b C) c D) d E) e

3) Aşağıdaki soruda her harf birbirinden farklı bir şekle karşılık gelmektedir.

In the following question, there is a different symbol to represent each letter.

△	■	⊗	□	■	⊗	△
■	△	⊗	⊗	⊗	■	⊗
⊗	□	△	⊗	□	⊗	■
■	⊗	□	⊗	△	⊗	⊗
△	⊗	⊗	⊗	■	△	■
⊗	⊗	■	△	■	□	⊗
⊗	■	⊗	⊗	△	⊗	■



I.

⊗	K
K	L

$K = \blacksquare \quad L = \otimes$



II.

M	K	
	K	N

$M = ? \quad N = ?$

I ve II, yukarıdaki tablonun farklı birer parçasıdır. Buna göre, II deki M ve N nin yerinde aşağıdakilerden hangisi gelmelidir?

I and II are different parts of the figure above. Accordingly, which of the following combinations should replace M and N in II?

- |    | <u>N</u> | <u>M</u> |
|----|----------|----------|
| A) | ■        | ⊗        |
| B) | ⊗        | ⊗        |
| C) | ■        | △        |
| D) | □        | ⊗        |
| E) | ⊗        | □        |

4)

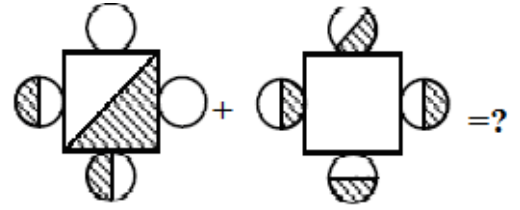


Figure 1

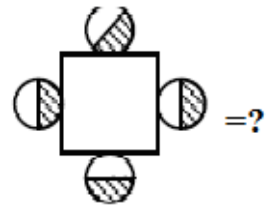
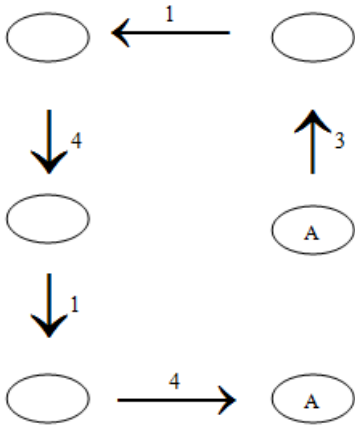


Figure 2

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

5)



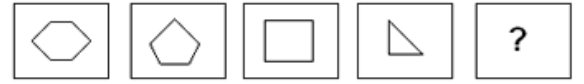
Yukarıdaki bilgilere göre A=?

According to the above informations,

A=?

A) 3 B) 4 C) 5 D) 6 E) 8

6)



A)



B)



C)



D)



E)



7)

$$\text{||||} - \square = 4$$

$$\triangle + \square = 20$$

$$\square + \text{||||} = 12$$

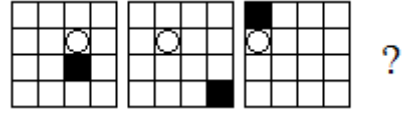
$$\square + \bigcirc = 6$$

$$\square + \text{||||} + \bigcirc + \triangle = ?$$

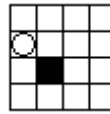
- A) 24 B) 30 C) 36 D) 40 E) 44

8) Soru işaretli yere hangisi gelmelidir?

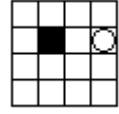
Which of the following should be square with question marks?



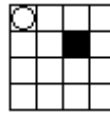
A)



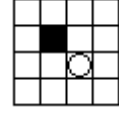
B)



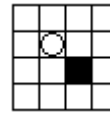
C)



D)



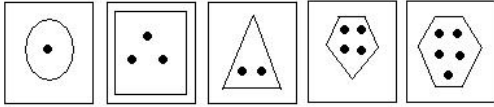
E)



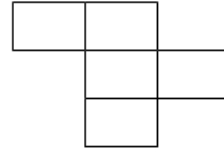
9) Aşağıdakilerden hangisi diğerlerine göre farklıdır?

Which of the following is different from others?

A) B) C) D) E)



10)



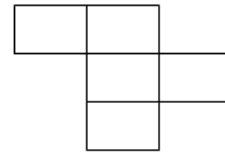
Şekil I

Figure I

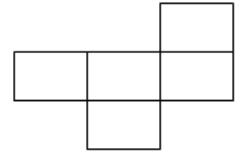
Şekil 1 saat yönünde  $180^\circ$  döndürülürse, aşağıdaki şekillerin hangisi elde edilir?

If Figure I is rotated  $180^\circ$  in clockwise, which of the following figures is obtained?

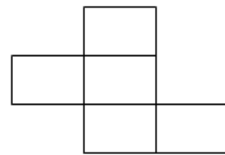
A)



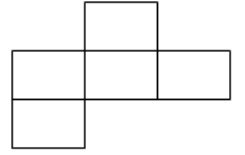
B)



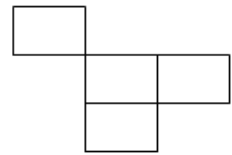
C)



D)



E)



11)

$$\left[ \left( 1 + \frac{1}{3} \right) : \left( \frac{0,04}{0,3} \right) \right] - 2 = ?$$

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

12)

$$3 \cdot (2x - 1) - 2(2x - 4) = 15 \quad x = ?$$

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

13)

$$\frac{\sqrt{6} + \sqrt{3}}{\sqrt{2} + 1} - \frac{\sqrt{14} - \sqrt{7}}{\sqrt{2} - 1} = ?$$

- A)  $\sqrt{7} - \sqrt{6}$  B)  $\sqrt{6} + \sqrt{3}$  C)  $\sqrt{7} - \sqrt{2}$   
D)  $\sqrt{7} + \sqrt{2}$  E)  $\sqrt{3} - \sqrt{7}$

14)

$$\frac{1}{a} + \frac{1}{b} + \frac{1}{c} = 9$$

$$\frac{1}{a} - \frac{1}{c} = -2$$

$$\frac{1}{b} + \frac{1}{c} = 7$$

$$c = ?$$

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



15)

$$\frac{3^{x+1} - 3^{x-a}}{3^x - 3^{x+2}} = -\frac{1}{3}$$

$$a = ?$$

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

16)

$$x - y = 3$$

$$y + z = -2$$

$$y^2 + yz - xy - xz = ?$$

A) -6 B) -3 C) 0 D) 6 E) 9

17)

$$\sqrt{(\log 3)^2 + \left(\log \frac{1}{9}\right)^2} = ?$$

A)  $5 \log 3$

B)  $\sqrt{5} \log 3$

C)  $2 \log 3$

D)  $\sqrt{2} \log 3$

E)  $\sqrt{5 \log 3}$

18)

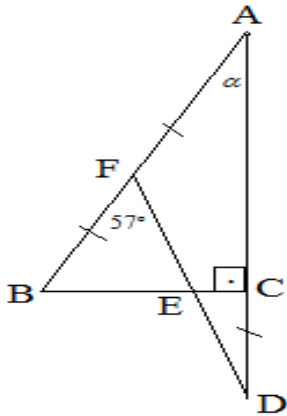
$$\lim_{x \rightarrow 2} \frac{x^2 + 3x - 5}{x^2 - 3x + 2} = ?$$

A) 2 B) 3 C) 4 D) 5 E) 7

19)  $\tan(\cot^{-1}(\sqrt{3})) = ?$

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

20)

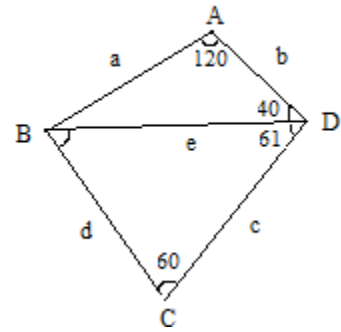


$|AF| = |FB| = |CD|$ ,  $m(\widehat{BFD}) = 57^\circ$ ,  
 $m(\widehat{BAD}) = \alpha = ?$

- A) 17 B) 27 C) 29 D) 35 E) 38

21) En uzun kenar hangisidir?

Which is the longest margin?



- A) a B) b C) c D) d E) e