



GALATA YÖS-SAT YAYINLARI

# YÖS

Yeni Tarz Sorular

New Style Questions

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**MATEMATİK**  
Mathematics

1

Soru Bankası / Question bank

Bu kitabın tüm hakları Sarıkaya eğitim danışmanlık hizmetleri limitet şirketine aittir. Bu kitabın tamamını veya bir kısmını elektronik, mekanik, fotokopi ya da herhangi bir kayıt sistemiyle çoğaltılması ve yayımlanması yasaktır.

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**ISBN:** 978 – 605 – 06867–0–8

**Yayın kurulu / Publishing Board**  
Galata

**Birinci baskı / First Edition**  
Mart 2020

**Kapak tasarımı / Cover Design**  
Tirkish Gurbanov

**Baskı / Press**  
Aykut Basım

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## ÖNSÖZ

Değerli öğretmen ve sevgili öğrencilerimiz;

Galata Eğitim kurumları, 2005'ten bugüne YÖS, SAT ve TÖMER sınavlarına hazırlanan öğrencilerimize eğitim öğretimin yanısıra rehberlik hizmetleri de veren bir eğitim kurumudur.

Kurumumuz ülkemizde YÖS'e girecek öğrencilerle birlikte dünyanın farklı yerlerinden ülkemize gelen uluslararası öğrencilere de YÖS'e hazırlanma aşamasında şu hizmetleri vermektedir;

- Ders çalışma teknikleri
- Üniversite ve bölüm bilgileri
- Başvuru ve tercih aşamasında rehberlik hizmetleri

Öğrencilerimiz bu aşamalardan doğru yönlendirmelerle geçerek, adım adım başarıya ulaşması sağlanmaktadır.

Elinizde bulunan Matematik 1 soru bankası, Üniversitelerin son yıllarda YÖS'te sormuş oldukları yeni tarz sorulara göre hazırlanmıştır. Bütün konuları kapsayacak şekilde her tarz sorudan hazırlanan kitabımız, sizleri başarıya ulaştıracak ve sınavlarda karşınıza çıkacak sorularda pratiklik kazandıracaktır. Değerli öğretmen ve sevgili öğrencilerimize faydalı olması dileğiyle.

## FOREWORD

Dear teachers and students;

Galata educational center is an educational institution that provides guidance services to the students who have been preparing for YÖS, SAT, and TÖMER exams since 2005.

Our institution is a hub of attraction for students from all over the world, for it familiarizes students with study techniques, provides information and details about universities and departments, and offers guidance services during application and preferences for the universities. And by doing so, it ensures success for our students.

The questions in the Mathematics 1 question bank were prepared correspondingly, through the years of experience to help you get a perfect score on the exam. All the questions are parallel and identical to the YOS exam questions. It covers all the topics which are in Math 1. We hope to be beneficial to our valuable teachers and dear students

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# ÜNİTE 1

## Unit 1

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**Temel Kavramlar /**  
Basic Concepts

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1.  $4 - 8 + 5 - 9 = ?$

- A) 9    B) 8    C) 5    D) -4    E) -8

2.  $13 - 15 + 22 - 23 = ?$

- A) -16    B) -15    C) -13    D) -3    E) -1

3.  $-18 + 21 - 33 + 41 = ?$

- A) 11    B) 12    C) 21    D) 23    E) 31

5.  $-8 + (-3) - (-7) = ?$

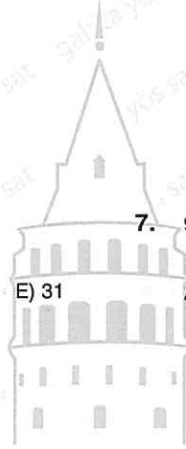
- A) 4    B) 3    C) -2    D) -4    E) -7

6.  $-(-11) + 12 - (-13) - 14 = ?$

- A) 20    B) 22    C) 23    D) 24    E) 25

7.  $9 - 3 - [(-5) + 4 - (-3)] = ?$

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



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4.  $-4 + 5 - 6 + 7 - 8 + 9 - 11 + 12 = ?$

- A) 2    B) 4    C) 12    D) 60    E) 72

8.  $[-11 + 15 - (-13) - 7] - [8 - (-9) - 10] = ?$

- A) 17    B) 13    C) 9    D) 5    E) 3

9.  $(-8) \cdot (3) - 5 = ?$

- A) -29    B) -19    C) -16    D) 19    E) 29

13.  $(-1 + 2 - 3) \cdot (-5) + (-4 + 5 - 6) \cdot 2 = ?$

- A) 20    B) 10    C) 0    D) -10    E) -20

10.  $(-12) : 4 + 5 - 7 = ?$

- A) 12    B) 9    C) -5    D) -8    E)  $-\frac{25}{3}$

14.  $(-5 + 5 \cdot 5 + 5) : 5 - 1 + 11 = ?$

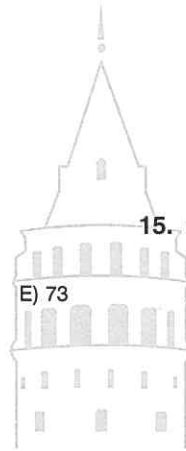
- A) 25    B) 15    C) 0    D) -15    E) -25

11.  $(-13) + (-4) \cdot 5 - (-20) \cdot 2 = ?$

- A) -73    B) -60    C) -7    D) 7

15.  $2 \cdot (-2) \cdot 3 + 4 - 5 \cdot (-7) = ?$

- E) 73    A) -13    B) -5    C) 0    D) 13    E) 27



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12.  $-3 + (-3 \cdot 2 + 4 - 8) \cdot 2 - (-4) = ?$

- A) -19    B) -15    C) -5    D) 19    E) 77

16.  $-[a - b + (-c)] + [b - (-a) - 2c] = ?$

- A)  $2b - c$     B)  $b - 2c$     C)  $b - 2a$   
D)  $b + 2a$     E)  $b + 2c$

1.  $\frac{18}{9} + \frac{22}{11} + \frac{28}{7} = ?$

- A) 3      B) 4      C) 8      D) 9      E) 11

2.  $\frac{26}{13} - \frac{44}{11} + \frac{45}{9} = ?$

- A) 3      B) 4      C) 7      D) 9      E) 11

3.  $\frac{8 \cdot 5}{4} + \frac{12 \cdot 13}{26} - \frac{14 \cdot 3}{7} = ?$

- A) 22      B) 16      C) 10      D) 6

5.  $4 \cdot (5 - x) + 3x = ?$

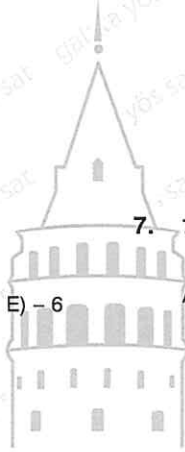
- A)  $20 + x$       B)  $20 - x$       C)  $x - 20$   
D)  $-x - 20$       E)  $5 - 7x$

6.  $14 - 2(5 - a) + 3a = ?$

- A)  $4 + 5a$       B)  $5 + 4a$       C)  $5 - 4a$   
D)  $4 - 5a$       E)  $-4 - a$

7.  $7(1 - a) + 8a(4 - 3) - 5a(8 - 9) = ?$

- A)  $7 + 3a$       B)  $7 - a$       C)  $7 + 6a$   
D)  $4a + 7$       E)  $7 + 7a$



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4.  $\frac{19 - 38}{16 - 17} + \frac{12 - 21}{3} + \frac{14 + 19}{11} = ?$

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

8.  $\frac{21}{7}(x - 4) + \frac{13}{2}(x + 2) - \frac{13x}{2} = ?$

- A)  $x + 1$       B)  $3x + 1$       C)  $3x - 1$   
D)  $x - 3$       E)  $x + 3$

9.  $4x - 7 = 17$

$\Rightarrow x = ?$

- A) 4    B) 6    C) 7    D) 17    E) 24

13.  $\frac{x+7}{4} = \frac{5}{3}$

$\Rightarrow x = ?$

- A)  $\frac{1}{3}$     B) 0    C)  $-\frac{1}{3}$     D) -3    E)  $-\frac{9}{2}$

10.  $3x - 8 = 4x - 9$

$\Rightarrow x = ?$

- A) 1    B)  $\frac{1}{8}$     C)  $\frac{1}{9}$     D) 0    E)  $-\frac{1}{7}$

14.  $\frac{x+3}{4} = \frac{2x+5}{7}$

$\Rightarrow x = ?$

- A) 28    B) 21    C) 7    D) 1    E) -1

11.  $x(3-4) + x(2-14) + 39 = 0$

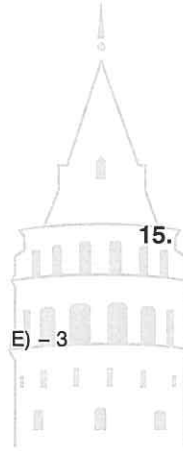
$\Rightarrow x = ?$

- A) 3    B) 1    C) 0    D) -1

15.  $\frac{2(x-4)}{3} = \frac{5(x+1)}{8}$

$\Rightarrow x = ?$

- A) 79    B) 59    C) 24    D) -59    E) -79



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12.  $5x(-5+6) + 4(x-5) + (-5x) = 8$

$\Rightarrow x = ?$

- A) -14    B) -7    C) -2    D) 7    E) 14

16.  $\frac{x+1}{x+3} = \frac{x+4}{x+2}$

$\Rightarrow (x+3) = ?$

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

1.  $2^3 + 3^2 - 8^0 = ?$

- A) 17      B) 16      C) 15      D) 14      E) 10

2.  $\left(\frac{1}{11}\right)^{-1} - \left(\frac{1}{2}\right)^{-2} + \left(\frac{1}{3}\right)^0 = ?$

- A) 8      B) 9      C) 11      D) 14      E) 16

3.  $11^2 + 3^4 - (-7^0)^1 = ?$

- A) 40      B) 41      C) 195      D) 203      E) 204

4.  $(-3)^2 + (-3^2) + (-2)^3 + (-2^3) = ?$

- A) 34      B) 25      C) 16      D) -7      E) -16

5.  $(-7)^2 \cdot (-13)^0 - 5^2 \cdot (-2)^4 \cdot \left[2 - \left(\frac{1}{2}\right)^{-1}\right] = ?$

- A) 49      B) 24      C) 0      D) -73      E) -351

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

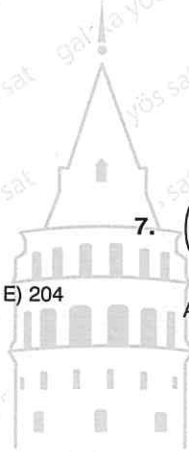
- A) 45      B) 43      C) 40      D) 35      E) 30

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

- A) 92      B) 38      C) 6      D) -6      E) -92

8.  $\left(\frac{1}{2}\right)^{-1} - \left(\frac{1}{3}\right)^{-1} - \left(\frac{1}{4}\right)^{-1} - \left(\frac{1}{5}\right)^{-1} = ?$

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



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9.  $|-7| - |3| = ?$

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

13.  $|3 - |-4|| + |5 - |3 - 6|| = ?$

- A) 3    B) 6    C) 7    D) 9    E) 15

10.  $|4 - 7| + |8 - 5| = ?$

- A) 24    B) 6    C) 0    D) -6    E) -24

14.  $||12 - 15| + |13 - 18| - 43| = ?$

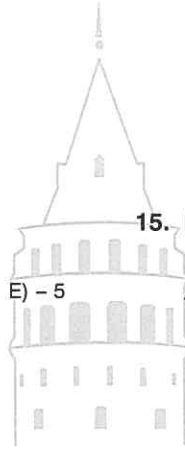
- A) -35    B) -15    C) 15    D) 35    E) 51

11.  $|-4 - 3 + 10 - 8| = ?$

- A) 25    B) 20    C) 10    D) 5

15.  $|4 \cdot (-3) + 3 \cdot (-2)| = ?$

- E) -5    A) -18    B) -6    C) 3    D) 6    E) 18



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12.  $||-3| - |-5|| = ?$

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

16.  $||-5| - |-7|| + |-3| \cdot (-2) = ?$

- A) 8    B) 4    C) -4    D) -12    E) -18

1.  $\frac{77 \cdot 68 \cdot 54 \cdot 25}{51 \cdot 55 \cdot 63} = ?$

- A) 20      B) 40      C) 50      D) 55      E) 85

2.  $\frac{[(-3)^0 \cdot 4^1]^2 - (-3)^2}{4^3 + (-2)^3 \cdot 5 - (5^4)^0 \cdot 10} = ?$

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

3.  $3(x + y + 5) - 6[x - (x - y) + 2] - 3 = ?$

- A)  $3(x - y)$       B)  $3x - 2y$       C)  $3x + 30$   
 D)  $-3x + 6y + 15$       E)  $3(x - y) + 30$

5.  $x - \{2x - [4 - 3x + 5(x - 7)] - x\} - 2x + 16 = ?$

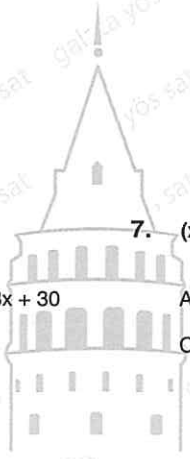
- A)  $2x - 31$       B) -15      C)  $x - 15$   
 D) 15      E)  $2x + 15$

6.  $\frac{a^3b}{a^2b} + \frac{(a^2 + b)b^3}{ab^2} - \frac{b^2}{a} - \frac{ab^4}{b^3} = ?$

- A) ab      B)  $ab^2$       C)  $\frac{a}{b}$       D) a      E) b

7.  $(x - y)^3 + (y - x)^3 + (2x - 3)^2 - (2x - 4)^2 = ?$

- A)  $4x^2 - 28x + 28$       B)  $4x^2 + 28x - 7$   
 C)  $4x + 7$       D)  $28x + 25$   
 E)  $4x - 7$



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4.  $3x - x(9 - 4y) + 12xy - 3(4 - 2x) = ?$

- A)  $16x - 12y$       B)  $12xy - 16$       C)  $16xy - 12$   
 D)  $12xy + 16$       E)  $14xy + 16$

8.  $\frac{7(a - b) + 8(b - a)}{11(a - b) - 13(b - a)} = ?$

- A)  $-\frac{15}{2}$       B)  $-\frac{1}{24}$       C) 0      D)  $\frac{1}{24}$       E)  $\frac{15}{2}$

9.  $a = 8$   
 $b = 2$

$\Rightarrow a - [(a : b) - a] + b = ?$

- A) 16    B) 14    C) 10    D) 6    E) 2

13.  $(16 : 8) : (4 : 2) = ?$

- A) 16    B) 8    C) 4    D) 2    E) 1

10.  $(-a)^3 \cdot (-a)^2 \cdot (-a)^0 \cdot (a)^{-4} = ?$

- A)  $-a$     B)  $-a^{-1}$     C)  $a^{-1}$     D)  $a$     E)  $a^{-2}$

14.  $\frac{(2 : 1 - 14 : 7)}{3^8 - 5^4} = ?$

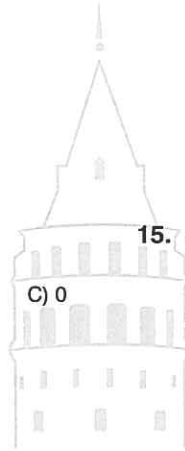
- A)  $-\frac{1}{56}$     B) 0    C)  $\frac{1}{56}$     D)  $\frac{1}{5936}$     E)  $\frac{1}{7186}$

11.  $(5 \cdot 22222) - (10 \cdot 11111) = ?$

- A) 11000    B) 10100  
D) 10000    E) -11000

15.  $\frac{(5^2 - 5^1 - 5^0) \cdot (2^3 + 2^2 + 2^1 + 2^0)}{57} = ?$

- A)  $\frac{1}{57}$     B)  $\frac{1}{15}$     C)  $\frac{1}{5}$     D) 5    E) 15



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12.  $20 - \{19 - [18 - (17 - 16)]\} = ?$

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

16.  $(-1040)^0 + (-1)^{123} - (-1913)^0 = ?$

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



# ÜNİTE 2

## Unit 2

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**Rasyonel Sayılar /**  
Rational Numbers

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1.  $x \in \mathbb{Z}$

$$\frac{2x-1}{x-2}$$

basit kesir olduğuna göre,  $\sum x$  kaçtır?According to the simple fraction what is  $\sum x$ ?

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

2.  $x < 50$  ve  $x \in \mathbb{Z}^+$

 $\frac{x}{13}$  bileşik kesir olduğuna göre, kaç adet  $x$  tam sayısı vardır? $\frac{x}{13}$  is a compound fraction, how many  $x$  integer numbers there?

- A) 76 B) 72 C) 70 D) 37 E) 35

3.  $\frac{a-4}{2a+1} \in \mathbb{Z}$  ve  $\frac{2a+1}{a-4} \in \mathbb{Z}$

$$\Rightarrow \sum a = ?$$

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

4.  $a, b \in \mathbb{Z}^+$  olmak üzere aşağıdakilerden hangisi  $a \frac{a}{b}$  kesrine denktir?Which of the following fractions is equivalent to  $a \frac{a}{b}$  for  $a, b \in \mathbb{Z}^+$ ?

- A)
- $\frac{16}{7}$
- B)
- $\frac{15}{7}$
- C)
- $\frac{13}{7}$
- D)
- $\frac{12}{7}$
- E)
- $\frac{11}{7}$

5.  $a$  ve  $b$  iki basamaklı pozitif tam sayılar olmak üzere,

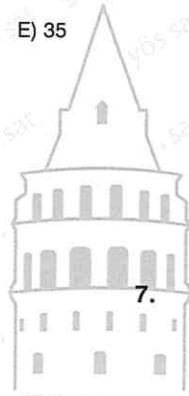
$$\frac{a}{b} = \frac{20}{30}$$

denliğini sağlayan  $(a)_{\max}$  kaçtır? $a$  and  $b$  are two - digit positive integers.What is the max( $a$ ) value for this?

- A) 88 B) 66 C) 64 D) 50 E) 44

6.  $-3 \frac{1}{2} = ?$

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



7. I.  $\frac{18}{4} = 4 \frac{2}{4}$

II.  $4 \frac{2}{4} = 2 \frac{1}{2}$

III.  $2 \frac{1}{2} = 2 + \frac{1}{2}$

IV.  $2 + \frac{1}{2} = \frac{4}{2} + \frac{1}{2}$

V.  $\frac{5}{2} = \frac{4}{2} + \frac{1}{2}$

İlk hata hangi adımda yapılmıştır?

In which step was the first mistake made?

- A) I B) II C) III D) IV E) V

8. 
$$\left. \begin{aligned} x &= 3\frac{4}{7} \\ y &= 4\frac{3}{7} \end{aligned} \right\} \Rightarrow x + y = ?$$

- A)  $\frac{56}{7}$     B)  $\frac{31}{7}$     C)  $\frac{25}{7}$     D)  $\frac{25}{4}$     E)  $\frac{25}{3}$

12. 
$$\frac{4\frac{3}{5}}{2 + 2\frac{3}{5}} = ?$$

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

9. 
$$2\frac{2}{5} + 2\frac{3}{5} + 2\frac{4}{5} + 3 + 2\frac{6}{5} = ?$$

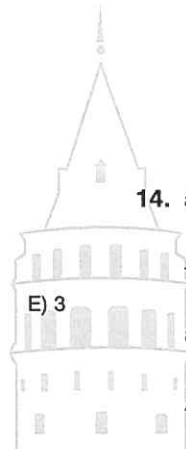
- A) 10    B) 13    C) 14    D) 16    E) 20

13. 
$$a + \frac{9}{7} = 4\frac{2}{7} \Rightarrow a \frac{a}{a+1} = ?$$

- A) 2    B)  $\frac{15}{7}$     C)  $\frac{15}{6}$     D) 3    E)  $\frac{15}{4}$

10. 
$$1\frac{1}{2} - \frac{3}{2} + 2\frac{1}{3} + \frac{2}{3} = ?$$

- A)  $6\frac{3}{4}$     B)  $6\frac{2}{3}$     C)  $6\frac{1}{2}$     D) 6



14.  $a, b \in \mathbb{N}$

$$\frac{4}{5} = \frac{8}{10} = \dots = \frac{a}{b}$$

E) 3

$a < 100 \Rightarrow (a + b)_{\max} = ?$

- A) 225    B) 216    C) 169    D) 162    E) 153

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11. 
$$4\frac{3\frac{1}{2}}{5} = ?$$

- A)  $\frac{22}{5}$     B)  $\frac{23}{5}$     C)  $\frac{28}{5}$     D)  $\frac{47}{10}$     E)  $\frac{48}{10}$

15. 
$$2\frac{2}{3} - 2\frac{3}{2} + \frac{7}{2} - \frac{8}{3} = ?$$

- A)  $-\frac{10}{6}$     B)  $-\frac{5}{6}$     C) 0    D)  $\frac{5}{6}$     E)  $\frac{10}{6}$