

Sirojiddin Turdaliyev

7-SINF UCHUN

# ALGEBRADAN TEST MATERIALLARI

Umumiy o'rta ta'lim maktablari matematika  
o'qituvchilari uchun

(Uslubiy qo'llanma)



«Farg'ona» nashriyoti,  
2015-yil

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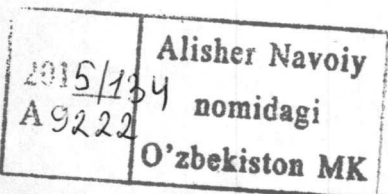
Ushbu uslubiy qo'llanmada 7-sinf algebra darsligining har bir bobiga oid ikkita variantda test topshiriqlari berilgan. Bu test topshiriqlaridan o'quvchilarning olgan bilimlarini tekshirish va aniqlashda foydalanish mumkin.

Mazkur qo'llanma umumiy o'rta ta'lim maktablari matematika o'qituvchilari va o'quvchilariga mo'ljallangan.

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## SO‘Z BOSHI

Hozirgi kunda umumiy o‘rta ta’lim maktablarida matematika fanidan o‘quvchilarning olgan bilimlarini tekshirish va aniqlash asosan test nazorat ishlari yordamida amalga oshirilmogda. ♦

Ushbu qo‘llanma asosan matematika fanidan umumiy o‘rta ta’limning Davlat ta’lim standarti talablari va o‘quv dasturlari, shuningdek, 2013-yilda «O‘qituvchi» nashriyot-matbaa ijodiy uyi tomonidan 7-sinf uchun nashr etilgan Sh.A.Alimov va boshqalar muallifligidagi «Algebra» darsligida belgilangan mavzularga moslab tuzilgan test topshiriqlarini o‘z ichiga olgan.

Qo‘llanmada keltirilgan topshiriqlardagi mashqlarning shartlari bir-biridan farqli, har xil qiyinlikda, teng kuchli qilib ikkita variantda tuzilgan. Har bir variant 20 tadan mashqlarni qamrab olgan. Bitta variantdagi topshiriqlarni bajarish uchun 35-40 daqiqa vaqt ajratish tavsiya etiladi.

Test topshiriqlarida berilgan har bir mashqning to‘rtta javobi bo‘lib, ulardan bittasi to‘g‘ri, qolgan uchasi esa noto‘g‘ri. Noto‘g‘ri javoblardagi xatolar ham ilmiy tomondan asoslangan bo‘lib, o‘quvchilarning to‘g‘ri va noto‘g‘ri javoblar ichidan to‘g‘ri

javobni tez topa olishi, ogʻzaki va yozma ravishda hisoblashi uchun mos qilib tuzilgan.

Qoʻllanmadagi mashqlar oʻquvchilarning matematik bilimlarni chuqur oʻzlashtirishiga, mustaqil ishlash malakalarini shakllantirishga, faol fikrlashiga ijobiy taʼsir koʻrsatadi.

Qoʻllanma umumiy oʻrta taʼlim maktablari matematika oʻqituvchilariga test nazorat ishlarini oʻtkazishda asqotadi, deb umid qilamiz.

Ushbu qoʻllanmaga oʻz fikr-mulohazalari va maslahatlarini bildirgan hamkasblarimizga minnatdorchilik bildiraman.

Muallif

## 1-§ Algebraik ifodalar

### 1-test ishi

### I-variant

1.  $(20-12:3) \cdot 2 + 8$  sonli ifodaning qiymatini toping.

- A) 32;      B) 40;      C) 42;      D) 30.

2. Qiymati 7,5 ga teng bo'lgan sonli ifodani aniqlang.

- 1)  $7,5 - 2 \cdot 0,7$ ;    2)  $7 + 0,4 \cdot 0,6$ ;    3)  $0,4 : 0,16 + 5$ .

- A) 1;      B) yo'q;      C) 2;      D) 3.

3.  $\left(\frac{1}{2} + \frac{1}{5}\right) \cdot \left(\frac{1}{2} - \frac{1}{7}\right)$  sonli ifodaning qiymatini toping.

- A) 0,5;      B) 2,5;      C) 0,25;      D) 25.

4. Agar  $a=-2$ ,  $b=3$ ,  $c=1$  bo'lsa,  $a+bc$  ifodaning son qiymatini toping.

- A) 1;      B) 0;      C) -1;      D) 5.

5.  $a=0,5$  bo'lsa,  $\frac{a+2,5}{2a-4}$  ifodaning son qiymatini toping.

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

6. Qavslarni oching:  $-(3a-b+2c)$ .

- A)  $-3a-b-2c$ ;      B)  $-3a+b+2c$ ;  
C)  $-3a+b-2c$ ;      D)  $-3a-b+2c$ .

7.  $5a+2b+3a-b$  ifodaning o'xshash hadlarini ixchamlang.

- A)  $8a+b$ ;      B)  $8a-b$ ;      C)  $2a+b$ ;      D)  $8a-3b$ .

8.  $2^2+4 \cdot 0,7-6$  ifodaning son qiymatini toping.

- A) 0,6;      B) 6,2;      C) 0,9;      D) 0,8.

9.  $x=12, y=9$  bo'lsa,  $\frac{1}{2}x + \frac{1}{9}y$  ifodaning son qiymatini toping.

- A) 8;      B) 6;      C) 7;      D) 5.

10.  $a$  ga  $b$  sonlar ko'paytmasining ikkilanganini aniqlang.

- A)  $2ab$ ;      B)  $2(a+b)$ ;      C)  $ab$ ;      D)  $ab+2$ .

11. Do'konga har birida 50 kg dan shakar bo'lgan  $a$  ta qop

keltirildi. Do'konga necha kilogramm shakar keltirilgan?

A)  $\alpha$  kg;      B)  $50 \alpha$  kg;      C)  $(50+\alpha)$ kg;      D) 50 kg.

12.  $\alpha=-8$ ,  $b=15$  bo'lsa,  $\frac{a+b}{7(a-b)}$  ifodaning son qiymatini toping.

A)  $\frac{1}{23}$ ;      B)  $\frac{1}{7}$ ;      C)  $-\frac{1}{23}$ ;      D)  $-\frac{7}{23}$ .

13.  $a = -\frac{1}{6}$ ,  $b = -2$  bo'lsa,  $6a-5b$  ifodaning son qiymatini toping.

A) 11;      B) -9;      C) -11;      D) 9.

14. Qavslarni oching:  $\alpha+(b-(c+d))$ .

A)  $\alpha+b-c-d$ ;      B)  $\alpha+b-c+d$ ;

C)  $\alpha+b+c-d$ ;      D)  $\alpha+b+c+d$ .

15. Qavslarni oching va soddalashtiring:  $4\alpha-(6\alpha-(2\alpha+5))$ .

A)  $-4\alpha+5$ ;      B) 5;      C)  $4\alpha+5$ ;      D) -5.

16. Ifodani soddalashtiring:  $-(8m+n)-(7m-3n)$ .

A)  $-15m-4n$ ;      B)  $m+2n$ ;

C)  $-15m+2n$ ;      D)  $-15m-2n$ .

17. O'xshash hadlarni ixchamlang:  $6,3\alpha + 9,8b + 3,8\alpha - 7,5b$ .

A)  $10,1\alpha - 2,3b$ ;                      B)  $9,1\alpha - 18,3b$ ;

C)  $9,1\alpha + 2,3b$ ;                      D)  $10,1\alpha + 18,3b$ .

18.  $17 \cdot 0,8 + 0,8 \cdot 13$  ifodaning qiymatini toping.

A) 2,4;                      B) 24;                      C) 0,24;                      D) 0,024.

19. Kassada har biri  $x$  soʻmdan 4 ta bilet va har biri  $y$  soʻmdan 5 ta bilet sotildi. Hamma biletlar uchun qancha pul toʻlangan?

A)  $4x+5y$ ;                      B)  $9xy$ ;                      C)  $9(x+y)$ ;                      D)  $20xy$ .

20. Doʻkonga har biri  $m$  kilogrammdan 25 yashik olma, har biri  $n$  kilogrammdan 20 yashik oʻrik, har biri  $x$  kilogrammdan 15 yashik shaftoli keltirildi. Doʻkonga necha kilogramm meva keltirilgan?

A)  $25m + 20n + 15x$  kg;

B)  $m + n + x$  kg;

C)  $mnx$  kg;

D)  $60(m + n + x)$  kg.



## II-variant

1.  $24 \cdot 6 \cdot 3 + 16 : 4$  sonli ifodaning qiymatini toping.

- A) 2;            B) 10;            C) 6;            D) 12.

2. Qiymati 9,3 ga teng bo'lgan sonli ifodani aniqlang.

- 1)  $6,17 + (3,5 - 0,74)$ ;    2)  $7,8 + 0,3 : 0,15$ ;    3)  $5,1 + 6 \cdot 0,7$ .

- A) 2;            B) 3;            C) yo'q;            D) 1.

3.  $\left(\frac{1}{3} - \frac{1}{6}\right) \cdot \left(\frac{1}{4} + \frac{1}{8}\right)$  sonli ifodaning qiymatini toping.

- A) 6,25;            B) 0,0625;            C) 625;            D) 0,625.

4. Agar  $a=3$ ,  $b=-2$ ,  $c=-1$  bo'lsa,  $a-bc$  ifodaning son qiymatini toping.

- A) -5;            B) -1;            C) 1;            D) 5.

5.  $b=0,2$  bo'lsa,  $\frac{b+3,4}{6+6b}$  ifodaning son qiymatini toping.

- A) 0,5;            B) 1;            C) 1,5;            D) -0,5.

6. Qavslarni oching:  $-(a-3b+2c)$ .

A)  $\alpha+3b+2b$ ;

B)  $-\alpha-3b+2c$ ;

C)  $\alpha-3b-2c$ ;

D)  $-\alpha+3b-2c$ .

7.  $7\alpha - 3b - 4\alpha + b$  ifodaning o'xshash hadlarini ixchamlang.

A)  $3\alpha+2b$ ;

B)  $11\alpha+4b$ ;

C)  $3\alpha-2b$ ;

D)  $3\alpha-4b$ .

8.  $3^2-5\cdot 0,4+7$  ifodaning son qiymatini toping.

A) 11;

B) 14;

C) 18;

D) 16.

9.  $m=18, n=7$  bo'lsa,  $\frac{1}{3}m - \frac{1}{7}n$  ifodaning son qiymatini toping.

A) 5;

B) 7;

C) 3;

D) 6.

10.  $m$  va  $n$  sonlar ayirmasining ikkilanganini aniqlang.

A)  $2(m-n)$ ;

B)  $m-n$ ;

C)  $2mn$ ;

D)  $2m-n$ .

11. Do'konga har birida 45 kg dan un bo'lgan  $m$  ta qop keltirildi.

Do'konga necha kilogramm un keltirilgan?

A)  $m$  kg;

B)  $45n$  kg;

C)  $(45+m)$  kg;

D) 45 kg.

12.  $x=7, y=-13$  bo'lsa,  $\frac{x-y}{5(x+y)}$  ifodaning son qiymatini toping.

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

13.  $m=-\frac{1}{4}, n=-7$  bo'lsa,  $8m+3n$  ifodaning son qiymatini toping.

- A) 23;      B) -19;      C) 19;      D) -23.

14. Qavslarni oching:  $a-(b+(c-d))$ .

- A)  $a-b-c-d$ ;      B)  $a-b+c-d$ ;  
C)  $a-b-c+d$ ;      D)  $a-b+c+d$ .

15. Qavslarni oching va soddalashtiring:  $5a - (3a+(6a-7))$ .

- A)  $-4a+7$ ;      B)  $4a-7$ ;      C)  $4a+7$ ;      D)  $-4a-7$ .

16. Ifodani soddalashtiring:  $-(9a-b)-(6a+5b)$ .

- A)  $15a+6b$ ;      B)  $3a-4b$ ;      C)  $-3a-6b$ ;      D)  $-15a-4b$ .

17. O'xshash hadlarni ixchamlang:  $3,7m-1,2n-2,3m+4,1n$ .

- A)  $1,4m+2,9n$ ;      B)  $1,4m-6,3$ ;  
C)  $1,4m-2,9n$ ;      D)  $6m+3,9n$ .

18.  $14,8 \cdot 2,3 + 5,2 \cdot 2,3$  ifodaning qiymatini toping.

- A) 4,6;                      B) 46;                      C) 4,60;                      D) 0,46.

19. Kassada har biri  $m$  soʻmdan 8 ta bilet va har biri  $n$  soʻmdan 7 ta bilet sotildi. Hamma biletlar uchun qancha pul toʻlangan?

- A)  $15mn$ ;                      B)  $15(m+n)$ ;  
C)  $8m+7m$ ;                      D) 15.

20. Doʻkonga har biri  $a$  kilogrammdan 20 yashik olma, har biri  $b$  kilogrammdan 18 yashik oʻrik, har biri  $c$  kilogrammdan 13 yashik anor keltirildi. Doʻkonga necha kilogramm meva keltirilgan?

- A)  $51abc$  kg;                      B)  $51(a+b+c)$  kg;  
C)  $20a+18b+13c$  kg;                      D)  $(a+b+c)$  kg.

## 2-§ Bir noma'lumli birinchi darajali tenglamalar

### I-variant

1. Tenglamani yeching:  $8x = -168$ .

- A) 20;      B) -21;      C) 19;      D) -22.

2. Tenglamani yeching:  $146 + x = 278$ .

- A) 133;      B) 131;      C) 132;      D) 130.

3.  $x + \frac{1}{2}x = 0$  tenglamaning ildizini aniqlang.

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

4. -2; 0; 3; 5 sonlari ichida qaysi tenglamaning ildizi yo'q?

- 1)  $x - \frac{3}{5}x = 0$ ;    2)  $2x - 6 = 0$ ;    3)  $500x = 100$ ;    4)  $x + 2 = 0$ .

- A) 1;      B) 3;      C) 4;      D) 2.

5. Ildizi 6 soniga teng bo'lgan tenglamani toping.

- 1)  $2x + x = 18$ ;      2)  $5x + x = 0$ ;      3)  $8x - 2x = 6$ .

- A) 2;      B) 1;      C) 3;      D) hammasi.

6. Tenglamani yeching:  $3x + 7 = 5 - x$ .

A) 0,5;      B) 1;      C) -0,4;      D) -0,5.

7.  $a$  ning qanday qiymatlarida  $ax=10$  tenglama butun yechimlarga ega bo'ladi?

A) -1 va 1;      B) -1; -2; -5 va 1; 2; 5;  
C) 1; 2 va -1; -2;      D) 1; 2; 5; 10 va -1; -2; -5; -10.

8.  $m$  ning qanday qiymatlarida  $6x+6=4x-m$  tenglamaning ildizi 1 ga teng bo'ladi?

A) 8;      B) 6;      C) -8;      D) 0.

9. Tenglamani yeching:  $-3x = \left(\frac{3}{5}\right)^2$ .

A) -1,2 ;      B) 12;      C) 1,2;      D) -12.

10.  $a$  ning qanday qiymatlarida  $8+5x=2a(2-x)$  tenglama yechimga ega bo'lmaydi?

A) 0;      B) 2,5;      C) -2,5;      D) -5.

11.  $-0,7x = \frac{7}{10}$  tenglamaning ildizini toping.

A) 0;      B)  $-\frac{49}{100}$ ;      C) 1;      D) -1.

12.  $-0,01x=10^2$  tenglamani yeching.

A) -10000;    B) -1000;    C) -100000;    D) -100.

13.  $\frac{x+11}{3} = 7$  tenglamaning ildizini aniqlang.

A) 11;    B) 9;    C) 10;    D) 12.

14. Tenglamani yeching:  $3(2x+1)+2(3-x)=13$ .

A) 0;    B) 1;    C) 2;    D) 3.

15.  $\frac{x}{4} + \frac{x}{8} = 18$  tenglamaning ildizini toping.

A) 56;    B) 48;    C) 44;    D) 40.

16. Alisher otasidan so'radi: «Bizda qancha tovuq va qancha qoramol bor?» Otasi dedi: «Barchasining boshi 35 ta, oyoqlarining soni 90 ta, buni o'zing hisoblab topaqol». Qancha tovuq, qancha qoramol bor?

A) 25 ta tovuq, 10 qoramol;

B) 20 ta tovuq, 15 qoramol;

C) 5 ta tovuq, 30 qoramol;

D) 15 ta tovuq, 20 qoramol.

17. Ota 50 yoshda, o'g'li esa 30 yoshda. Necha yil avval o'g'li otasidan 2 marta yosh bo'lgan?

- A) 20;            B) 10;            C) 5;            D) 15.

18. Tenglamani yeching:  $5(x-2)=3(2x-1)$ .

- A) -7;            B) -8;            C) -5;            D) -6.

19. Tenglamani yeching:  $\frac{9x-4}{7} - \frac{3+5x}{5} = 6$ .

- A) 24,6;            B) 16,9;            C) 21;            D) 25,1.

20. Tenglamani yeching:  $(13,4-x) \cdot 4,3 - 20,05 = 78,05 + 6,7x$ .

- A) 3,68;            B) -3,86;            C) -3,68;            D) 3,86.

### II-variant

1. Tenglamani yeching:  $7x = -175$ .

- A) -26;            B) 24;            C) -25;            D) 23.

2. Tenglamani yeching:  $382 - x = 167$ .

- A) 215;            B) 216;            C) 225;            D) 226.

3.  $x - \frac{1}{4}x = 0$  tenglamaning ildizini aniqlang.

- A)  $\frac{1}{4}$ ;            B) -1;            C) 0;            D)  $-\frac{1}{4}$ .

4. -7; -1; 0; 8 sonlari ichida qaysi tenglamaning ildizi yo'q?

- 1)  $\frac{1}{18}x - x = 0$ ;            2)  $2x + 14 = 0$ ;



3)  $8x-1=0$ ;                      4)  $4x=3x-1$ .

- A) 1;                      B) 3;                      C) 2;                      D) 4.

**5. Ildizi 7 soniga teng bo'lgan tenglamani toping.**

1)  $8x-x=0$ ;                      2)  $5x+3x=56$ ;                      3)  $8x-5x=69$ .

- A) 3;                      B) Hammasi;                      C) 1;                      D) 2.

**6. Tenglamani yeching:  $12x-19=23+17x$ .**

- A) 8,4;                      B) -7,8;                      C) -8,4;                      D) 8,2.

**7.  $a$  ning qanday qiymatlarida  $ax=8$  tenglama butun yechimlarga ega bo'ladi?**

- A) 1; 2; 4 va -1; -2; -4;                      B) -1 va 1;  
C) 1; 2; 4; 8 va -1; -2; -4; -8;                      D) 1; 2 va 0.

**8.  $n$  ning qanday qiymatlarida  $3x+3=2x+n$  tenglamaning ildizi 1 ga teng bo'ladi?**

- A) 2;                      B) -4;                      C) -2;                      D) 4.

**9. Tenglamani yeching:  $7x = \left(-\frac{7}{8}\right)^2$ .**

- A)  $\frac{7}{64}$ ;                      B) 64;                      C) 7;                      D)  $\frac{7}{8}$ .

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10.  $\alpha$  ning qanday qiymatlarida  $(\alpha-2)x=4$  tenglamaning ildizi

natural son bo'ladi?

A) 1; 2; 4;                      B) 1; 4;

C) 3; 4; 6;                      D) 1; 2.

11.  $0,9x = -\frac{9}{10}$  tenglamaning ildizini toping.

A)  $\frac{81}{100}$ ;                      B) -1;                      C)  $-\frac{81}{100}$ ;                      D) 1.

12.  $-0,02y=4^2$  tenglamani yeching.

A) -0,08;                      B) -8000;                      C) -80;                      D) -800.

13.  $\frac{x+7}{5} = 6$  tenglamaning ildizini aniqlang.

A) 30;                      B) 23;                      C) 27;                      D) 24.

14. Tenglamani yeching:  $5(2x-1)+4(1-2x)=13$ .

A) 9;                      B) 8;                      C) 6;                      D) 7.

15.  $x + x = x \cdot x$  tenglamaning ildizini toping.

A) 0 va 2;                      B) 2;                      C) 3;                      D) 0.

16. Salima onasidan so'radi: «Oyi, uyimizda qancha o'rdak va qancha qo'y bor?» Onasi dedi: «Barchasining boshi 26 ta,

oyoqlarining soni 80 ta, buni o'zing hisoblab topaqol». Salimalarning uyida qancha o'rdak va qancha qo'y bor?

- A) 14 ta o'rdak, 12 qo'y;
- B) 12 ta o'rdak, 14 qo'y;
- C) 10 ta o'rdak, 30 qo'y;
- D) 15 ta o'rdak, 20 qo'y.

17. Onasi 40 yoshda, qizi esa 15 yoshda. Necha yildan keyin onasi qizidan 2 marta katta bo'ladi?

- A) 20;
- B) 10;
- C) 12;
- D) 15.

18. Tenglamani yeching:  $3(x-1)=4(3x-1)$ .

- A)  $\frac{4}{9}$ ;
- B) -9;
- C)  $\frac{1}{4}$ ;
- D)  $-\frac{1}{9}$ .

19. Tenglamani yeching:  $\frac{8x+5}{6} - \frac{4+7x}{4} = 9$ .

- A) 21;
- B) -22;
- C) 22;
- D) -23.

20. Tenglamani yeching:  $(11,2-x) \cdot 3,2 - 50,08 = -8,12 - 5,1x$ .

- A) -3,4;
- B) 4,3;
- C) -3,4;
- D) -4,3.

### 3-§ Birhadlar va ko'phadlar

#### 3-test ishi

#### I-variant

1. Ko'paytmani daraja ko'rinishida ifodalang:  $(3\alpha)(3\alpha)(3\alpha)(3\alpha)$ .

- A)  $3\alpha^4$ ;      B)  $(12\alpha)^4$ ;      C)  $(3\alpha)^4$ ;      D)  $81\alpha$ .

2.  $-4 \cdot (-3)^2$  ni hisoblang.

- A) -36;      B) -12;      C) 36;      D) 12.

3. Sonlarni asosi 2 bo'lgan daraja shaklida yozing:  $2^5 \cdot 8 \cdot 16$ .

- A)  $2^{11}$ ;      B)  $2^9$ ;      C)  $2^{10}$ ;      D)  $2^{12}$ .

4. Hisoblang:  $\frac{3^7 \cdot 3^5}{3^4 \cdot 3 \cdot 3^5}$ .

- A) 6;      B) 9;      C) 3;      D) 12.

5. Birhadni standart shaklda yozing:  $2^2 ab \cdot (-3) a^2 b$ .

- A)  $-12a^3 b^3$ ;      B)  $-6a^3 b^3$ ;      C)  $12a^2 b^2$ ;      D)  $-5a^3 b^3$ .

6. Birhadlarni ko'paytiring:  $(-5a^2)(-9a)$ .

- A)  $-45a^3$ ;      B)  $14a^3$ ;      C)  $45a^3$ ;      D)  $-14a^3$ .

7. Birhadlarni ko'paytiring:  $(0,3m^2n)(0,2mn^3)$ .

- A)  $-0,5m^3n^4$ ;      B)  $-6m^3n^3$ ;      C)  $-0,6m^3n^4$ ;      D)  $-0,06m^3n^4$ .

8. Birhadni darajaga ko'taring:  $(-2a^4b^2)^3$ .

- A)  $8a^7b^5$ ;      B)  $-8a^{12}b^6$ ;      C)  $-8a^4b^6$ ;      D)  $-2a^{12}b^6$ .

9. Ko'phadni standart shaklga keltiring:  $5x^2+3x-2x^2-x$ .

- A)  $3x^2-3x$ ;      B)  $7x^2-2x$ ;      C)  $3x^2+2x$ ;      D)  $5x^2+x$ .

10. Ko'phad va birhad ko'paytmasini toping:  $-5m(2m^2-7n)$ .

- A)  $-10m^3-35mn$ ;      B)  $-10m^3+35mn$ ;  
C)  $-7m^2+12mn$ ;      D)  $-10m^2-7n$ .

11. Ifodani soddalashtiring:  $7(a-2b)+5(2a+b)$ .

- A)  $17a-9b$ ;      B)  $17a+9b$ ;      C)  $17a+19b$ ;      D)  $17a-19b$ .

12. Ko'phadlarni ko'paytiring:  $(m+1)(m-2)$ .

- A)  $m^2-3m-2$ ;      B)  $m^2+m-2$ ;      C)  $m^2-m-2$ ;      D)  $m^2-m-1$ .

13. Ko'phadlarni ko'paytiring:  $(3a-2b)(4a+b)$ .

- A)  $12a^2-11ab-2b^2$ ;      B)  $7a^2-3ab-b^2$ ;  
C)  $12a^2+5ab+2b^2$ ;      D)  $12a^2-5ab-2b^2$ .

14. Agar  $a=2$  bo'lsa,  $\frac{3}{4}a^3$  ifodaning qiymatini toping.

- A) 4;      B) 5;      C) 6;      D) 3.

15. Tenglamani yeching:  $x \cdot 2^2 = 2^6$ .

- A) 16;      B) 32;      C) 8;      D) 64.

16. Ifodani soddalashtiring:  $(3m-n^2+k)+(n^2+2k)$ .

- A)  $5m-k$ ;      B)  $3m-k$ ;      C)  $3m+k$ ;      D)  $3m-3k$ .

17. Bo'lishni bajaring:  $20a : (-5a)$ .

- A)  $-4a$ ;      B) 4;      C)  $4a$ ;      D) -4.

18. Bo'lishni bajaring:  $-6a^2b^2c : (3a^2bc)$ .

- A)  $\frac{1}{2}b$ ;      B)  $-2b$ ;      C)  $-b$ ;      D) 2.

19.  $6(2m-3n)-3(3m-2n)+3(3m+n)$  ifodani soddalashtiring.

- A)  $12m+9n$ ;      B)  $30m-27n$ ;  
C)  $12m-9n$ ;      D)  $18m+21n$ .

20. Bo'lishni bajaring:  $(8a^2b+4ab^2):(2ab)$ .

- A)  $4a+2b$ ;      B)  $4a+b$ ;  
C)  $4ab+2$ ;      D)  $8a+4b$ .

### II-variant

1. Ko'paytmani daraja ko'rinishida ifodalang:  $(4b)\cdot(4b)\cdot(4b)$ .

- A)  $4b^3$ ;      B)  $64b$ ;      C)  $(4b)^3$ ;      D)  $(64b)^3$ .

2.  $-3\cdot(-5)^2$  ni hisoblang.

- A)  $-15$ ;      B)  $-75$ ;      C)  $-28$ ;      D) 75.

3. Sonlarni asosi 3 bo'lgan daraja shaklida yozing:  $3^4\cdot 9\cdot 27$ .

- A)  $3^{11}$ ;      B)  $3^8$ ;      C)  $3^{10}$ ;      D)  $3^9$ .

4. Hisoblang:  $\frac{2^4 \cdot 2^6 \cdot 2^7}{2^5 \cdot 2^7}$ .

- A) 32;      B) 16;      C) 64;      D) 8.

5. Birhadni standart shaklda yozing:  $3^2mn^2\cdot(-2)m^3n$ .

- A)  $18m^3n^2$ ;      B)  $-11m^4n^3$ ;  
C)  $-18m^4n^3$ ;      D)  $-5m^4n^3$ .

6. Birhadlarni ko'paytiring:  $(-7b)\cdot 3b^2$ .

- A)  $-21b^3$ ;      B)  $-10b^2$ ;      C)  $21b^2$ ;      D)  $-4b^3$ .

7. Birhadlarni ko'paytiring:  $(0,4a^2b^2) \cdot (-0,3a^3b)$ .

- A)  $-1,2a^5b^3$ ;      B)  $-0,12a^5b^3$ ;      C)  $-0,1a^3b^2$ ;      D)  $-0,7a^4b$ .

8. Birhadni darajaga ko'taring:  $(-3m^6n^4)^2$ .

- A)  $-3m^{12}n^8$ ;      B)  $-9m^8n^6$ ;      C)  $9m^6n^4$ ;      D)  $9m^{12}n^8$ .

9. Ko'phadni standart shaklga keltiring:  $19m^2-6n+4m^2-3n$ .

- A)  $15m^2-9n$ ;      B)  $21m^2-9n$ ;      C)  $21m^2+3n$ ;      D)  $21m^2+9n$ .

10. Ko'phad va birhad ko'paytmasini toping:  $-6x(4y+3x^2)$ .

- A)  $-10xy-9x^2$       B)  $-24xy+18x^3$

- C)  $-24xy-18x^3$       D)  $24xy-18x^2$

11. Ifodani soddalashtiring:  $8(m+n)-2(3m-n)$ .

- A)  $2m+10n$ ;      B)  $2m+2n$ ;      C)  $2m-6n$ ;      D)  $2m-10n$ .

12. Ko'phadlarni ko'paytiring:  $(a-1)(a+3)$

- A)  $a^2+2a+3$ ;      B)  $a^2+2a-3$ ;      C)  $a^2-2a-3$ ;      D)  $a^2+4a+3$ .

13. Ko'phadlarni ko'paytiring:  $(4x-3y)(x-2y)$ .

- A)  $4x^2-11xy-6y^2$ ;      B)  $4x^2-5xy+6y^2$ ;

- C)  $4x^2+11xy+6y^2$ ;      D)  $4x^2-11xy+6y^2$ .

14. Agar  $b = -6$  bo'lsa,  $\frac{5}{6}b^2$  ifodaning qiymatini toping.

- A)  $-30$ ;      B)  $-5$ ;      C)  $30$ ;      D)  $25$ .

15. Tenglamani yeching:  $3^5 \cdot y = 3^7$ .

- A)  $9$ ;      B)  $3$ ;      C)  $8$ ;      D)  $6$ .

16. Ifodani soddalashtiring:  $(2\alpha+b^2-c)-(b^2-2c)$ .

- A)  $2\alpha-c$ ;      B)  $2\alpha+b^2$ ;      C)  $2\alpha+c$ ;      D)  $2\alpha+2b^2-c$ .

17. Bo'lishni bajaring:  $-16\alpha: (4\alpha)$ .

- A) 4;      B) 6;      C) -6;      D) -4.

18. Bo'lishni bajaring:  $8\alpha^3bc^2:(-2\alpha^2bc^2)$ .

- A)  $-4\alpha c$ ;      B)  $-4\alpha$ ;      C)  $-4b$ ;      D)  $-4ab$ .

19.  $7(4\alpha+3)-6(5+4\alpha)+2(3\alpha-1)$  ifodani soddalashtiring.

- A)  $-10\alpha+11$ ;      B)  $10\alpha+11$ ;      C)  $9\alpha-12$ ;      D)  $10\alpha-11$ .

20. Bo'lishni bajaring:  $(14\alpha^2b^3-10ab):(2ab)$ .

- A)  $7ab^2-5$ ;      B)  $7ab-5$ ;      C)  $7\alpha+5$ ;      D)  $7ab^2+5$ .



## 4-§ Ko'phadni ko'paytuvchilarga ajratish

### 4-test ishi

#### I-variant

1. Hisoblang:  $32 \cdot 4,78 + 4,78 \cdot 68$ .

- A) 4,78;      B) 478;      C) 47,8;      D) 4780.

2. Umumiy ko'paytuvchini qavsdan tashqariga chiqaring:  $3\alpha^2 + 6\alpha$ .

- A)  $3\alpha(\alpha+1)$ ;      B)  $\alpha(\alpha+2)$ ;      C)  $\alpha(\alpha+1)$ ;      D)  $3\alpha(\alpha+2)$ .

3. Umumiy ko'paytuvchini qavsdan tashqariga chiqaring:

$$16x^4y^3 - 8x^3y^4.$$

- A)  $8x^3y^3(2x-y)$ ;      B)  $8x^3y^3(x-y)$ ;  
C)  $8x^4y^3(1-y)$ ;      D)  $8x^3y(2x-1)$ .

4. Ko'paytuvchilarga ajrating:  $\alpha(m-n) + b(m-n)$ .

- A)  $(m-n)(\alpha-b)$ ;      B)  $(m-n)(\alpha+1)$ ;  
C)  $(m+n)(\alpha+b)$ ;      D)  $(m-n)(\alpha+b)$ .

5. Ko'paytuvchilarga ajrating:  $5m(2m-n) + (2m-n)^2$ .

- A)  $(2m-n)(3m+n)$ ;      B)  $(2m-n)(7m+n)$ ;  
C)  $(2m-n)(7m-n)$ ;      D)  $(2m-n)(5m-1)$ .

6.  $(3x+y)^2$  ifodani ko'phad shaklida tasvirlang.

A)  $9x^2+2xy+y^2$ ;                      B)  $9x^2+6xy+y^2$ ;

C)  $9x^2+y^2$ ;                      D)  $3x^2+3xy+y^2$ .

7.  $(0,4a-0,5b)^2$  ifodani ko'phad shaklida tasvirlang.

A)  $16a^2-0,4ab+0,25b^2$ ;                      B)  $0,16a^2-0,2ab+0,25b^2$ ;

C)  $0,16a^2-0,25b^2$ ;                      D)  $1,6a^2-4ab+2,5b^2$ .

8. Hisoblang:  $17^2-15^2$ .

A) 4;                      B) 32;                      C) 64;                      D) 16.

9. Agar  $a=3$ ,  $b=1$ ,  $c=2$  bo'lsa,  $a(a+b)-b-c$  ifodaning qiymatini toping.

A) 8;                      B) 12;                      C) 9;                      D) 6.

10. Ko'paytirishni bajaring:  $(2x+3y)(2x-3y)$ .

A)  $4x-9y$ ;                      B)  $4x^2-9y^2$ ;                      C)  $2x^2-3y^2$ ;                      D)  $2x^2-3y^2$ .

11. Ko'paytirishni bajaring:  $(3x^2y-5xy^2)(3x^2y+5xy^2)$ .

A)  $9x^4y^2-25x^2y^4$ ;                      B)  $9x^4y-25xy^4$ ;

C)  $3x^4y^2-5x^2y^4$ ;                      D)  $9x^2y-25xy$ .

12. Ifodani soddalashtiring:  $5m^2-9-(m-3)(m+3)$ .

A)  $4m^2-18$ ;                      B)  $3m^2$ ;                      C)  $4m^2$ ;                      D)  $6m^2-3$ .

13. Ifodani soddalashtiring:  $(y-7)^2-2(y-7)(y-9)+(y-9)^2$ .

A)  $(y-7)(y-9)$ ;                      B) 6;                      C)  $2(y-9)$ ;                      D) 4.

14. Ko'paytuvchilarga ajrating:  $16\alpha^2-121$ .

- A)  $(4\alpha-11)(4\alpha+11)$ ;                      B)  $(\alpha-11)(\alpha+11)$ ;  
C)  $(4\alpha-10)(4\alpha+10)$ ;                      D)  $(2\alpha+11)(4\alpha+11)$ .

15. Ko'paytuvchilarga ajrating:  $x^2-\alpha^2+2ab-b^2$ .

- A)  $(x-\alpha)(x+\alpha)$ ;                              B)  $(x-\alpha+b)(x-b)$ ;  
C)  $(x-\alpha+b)$ ;                                  D)  $(\alpha-b-x)(\alpha-x-b)$ .

16. Ko'paytuvchilarga ajrating:  $x^3+8$ .

- A)  $(x+2)(x^2+2x+2)$ ;                      B)  $(x+2)(x^2-2x+4)$ ;  
C)  $(x+2)(x^2+2x-4)$ ;                      D)  $(x+2)(x^2-x+4)$ .

17. Agar  $\alpha=5$  bo'lsa,  $(\alpha-3)(\alpha^2+3\alpha+9)$  ifodaning qiymatini toping.

- A) 102;                      B) 88;                      C) 108;                      D) 98.

18. Tenglamani yeching:  $(x+1)(x-4)=0$ .

- A) -1 va 4;                      B) 1 va -4;                      C) 0 va 4;                      D) 0 va 1.

19. Ko'paytuvchilarga ajrating:  $(4\alpha-3)^2-16$ .

- A)  $(4\alpha+7)(4\alpha+1)$ ;                      B)  $(4\alpha+1)(4\alpha-7)$ ;  
C)  $(4\alpha-1)(4\alpha+7)$ ;                      D)  $(4\alpha-19)(4\alpha+13)$ .

20. Ifodani soddalashtiring:  $(\alpha+2b)(\alpha^2-2ab+4b^2)-8b^3$ .

- A)  $\alpha^3$ ;                      B)  $2b^3$ ;                      C)  $b^3$ ;                      D)  $2\alpha^3$ .

## II-variant

1. Hisoblang:  $4,38 \cdot 149 - 49 \cdot 4,38$ .

- A) 43,8;      B) 4380;      C) 438;      D) 4,38.

2. Umumiy ko'paytuvchini qavsdan tashqariga chiqaring:

$$12m^2 - 4m.$$

- A)  $4m(-3m-1)$ ;      B)  $4m(m-2)$ ;      C)  $4m(m-1)$ ;      D)  $4m(3m-2)$ .

3. Umumiy ko'paytuvchini qavsdan tashqariga chiqaring:

$$18a^5b^4 - 9a^4b^5.$$

- A)  $9a^4b^4(2a-1)$ ;      B)  $9a^4b^4(a-b)$ ;  
C)  $9a^4b^4(1-b)$ ;      D)  $9a^4b^4(2a-b)$ .

4. Ko'paytuvchilarga ajrating:  $m(a+b) - n(a+b)$ .

- A)  $(a+b)(m-1)$ ;      B)  $(a-b)(m+n)$ ;  
C)  $(a+b)(m-n)$ ;      D)  $(a+b)(1-n)$ .

5. Ko'paytuvchilarga ajrating:  $6a(a+2b) - (a+2b)^2$ .

- A)  $(a+2b)(5a+2b)$ ;      B)  $(a+2b)(5a-2b)$ ;  
C)  $(a+2b)(7a+2b)$ ;      D)  $(a-2b)(5a+7b)$ .

6.  $(2a-b)^2$  ifodani ko'phad shaklida tasvirlang.

- A)  $4a^2 - 4ab + b^2$ ;      B)  $4a^2 - 2ab + b^2$ ;  
C)  $4a^2 + 4ab + b^2$ ;      D)  $4a^2 + 2ab - b^2$ .

7.  $(0,3m+0,2n)^2$  ifodani ko'phad shaklida tasvirlang.

- A)  $0,9m^2+0,12mn+0,41^2$ ;      B)  $0,09m^2+0,06mn+0,04n^2$ ;  
C)  $0,09m^2+0,04n^2$ ;      D)  $0,09m^2+0,12mn+0,04n^2$ .

8. Hisoblang:  $19^2-15^2$ .

- A) 105;      B) 96;      C) 86;      D) 106.

9. Agar  $a=2$ ,  $b=8$ ,  $c=4$  bo'lsa,  $a(b-c)+b-c$  ifodaning qiymatini toping.

- A) 10;      B) 14;      C) 12;      D) 16.

10. Ko'paytirishni bajaring:  $(5a-4b)(5a+4b)$ .

- A)  $25a^2-16b^2$ ;      B)  $5a^2-4b^2$ ;      C)  $25a-16b$ ;      D)  $25a^2-b^2$ .

11. Ko'paytirishni bajaring:  $(2a^2b^3+3ab^2)(2a^2b^3-3a^3b^2)$ .

- A)  $4a^2b^3-9a^3b^2$ ;      B)  $2a^4b^6-3a^6b^4$ ;  
C)  $4a^4b^5-3a^5b^4$ ;      D)  $4a^4b^6-9a^6b^4$ .

12. Ifodani soddalashtiring:  $(a+4)(a-4)-a^2+18$ .

- A) 2;      B) 4;      C) 7;      D)  $2a$ .

13. Ifodani soddalashtiring:  $(a+8)^2-2(a+8)(a-2)+(a-2)^2$ .

- A)  $a+18$ ;      B) 110;      C)  $a-2$ ;      D) 106.

14. Ko'paytuvchilarga ajrating:  $25m^2-144$ .

- A)  $(m-12)(5m+12)$ ;      B)  $(5m-12)(5m+12)$ ;

C)  $5(m-12)(m+12)$ ; D)  $(5m+12)(5m-1)$ .

15. Ko'paytuvchilarga ajrating:  $x^2-y^2-2y-1$ .

A)  $(x-y-1)(x+y+1)$ ; B)  $(x-y+1)(x+y+1)$ ;

C)  $(x+y-1)(x+y+1)$ ; D)  $(x-y-1)(x+y-1)$ .

16. Ko'paytuvchilarga ajrating:  $y^3-27$ .

A)  $(y-3)(y^2-3y+9)$ ; B)  $(x-3)(x^2+3x+9)$ ;

C)  $(y-3)(y^2+3y-9)$ ; D)  $(x-3)(x^2+6x-9)$ .

17. Agar  $\alpha=4$  bo'lsa,  $(\alpha+2)(\alpha^2-2\alpha+4)$  ifodaning qiymatini toping.

A) 64; B) 72; C) 62; D) 74.

18. Tenglamani yeching:  $(y-2)(y+3)=0$ .

A) 2 va 3; B) -2 va 3; C) 2 va 0; D) -2 va -3.

19. Ko'paytuvchilarga ajrating:  $(5x-4)^2-25$ .

A)  $(5x-1)(5x+4)$ ; B)  $(5x-1)(5x+9)$ ;

C)  $(5x-9)(5x+1)$ ; D)  $(5x-9)(5x-1)$ .

20. Ifodani soddalashtiring:  $(m+3n)(m^2-3mn+9n^2)-27n^3$ .

A)  $9m^3$ ; B)  $n^3$ ; C)  $3m$ ; D)  $m^3$ .

## 5-§ Algebraik kasrlar

### 5-test ishi

#### I-variant

1. Surati  $a$  va  $b$  sonlarning ko'paytmasiga, maxraji esa shu sonlar yig'indisining kvadratiga teng bo'lgan algebraik kasrni aniqlang.

A)  $\frac{ab}{a+b}$ ;    B)  $\frac{ab}{a^2+b^2}$ ;    C)  $\frac{ab}{(a+b)^2}$ ;    D)  $\frac{ab}{2(a+b)}$ .

2. Kasrni qisqartiring:  $\frac{9a^4b}{27a^3b}$ .

A)  $\frac{a}{3}$ ;    B)  $\frac{b}{3}$ ;    C)  $\frac{1}{3a}$ ;    D)  $\frac{1}{3b}$ .

3.  $a$  ning qanday qiymatida  $\frac{7a-2}{16}$  kasrning qiymati  $\frac{3}{4}$  ga teng

bo'ladi?

A) 3;    B) 0;    C) 1;    D) 2.

4. Agar  $m=2,5$  bo'lsa,  $\frac{m+1}{m-2}$  ifodaning qiymatini toping.

A) 5;    B) 7;    C) 6;    D) 8.

5. Kasrni qisqartiring:  $\frac{7a+21b}{3a+9b}$ .

A)  $2\frac{2}{3}$ ;      B)  $2\frac{1}{3}a$ ;      C)  $2\frac{1}{3}$ ;      D)  $2\frac{2}{3}b$ .

6.  $\frac{2}{3a^3}$ ,  $\frac{1}{b^2}$  va  $\frac{5}{6ab}$  kasrlarning umumiy maxrajini toping.

A)  $6a^3b^2$ ;      B)  $3a^3b^2$ ;      C)  $6ab$ ;      D)  $a^3b^2$ .

7. Kasrni qisqartiring:  $\frac{4a^2 - 9b^2}{2a + 3b}$ .

A)  $2a+3b$ ;      B)  $2a-3b$ ;      C)  $2a-3$ ;      D)  $a-3b$ .

8. Kasrlarning yig'indisini toping:  $\frac{a^2}{ax - x^2} + \frac{x}{x - a}$ .

A)  $\frac{x}{a-x}$ ;      B)  $-\frac{2a+b}{ab}$ ;      C)  $\frac{a-x}{x}$ ;      D)  $\frac{a+x}{x}$ .

9. Kasrlarning ayirmasini toping:

$$\frac{b}{2a^2 - ab} - \frac{4a}{2ab - b^2}$$

A)  $\frac{b}{2a-b}$ ;      B)  $-\frac{2a+b}{ab}$ ;      C)  $-\frac{2a-b}{ab}$ ;      D)  $\frac{a}{2a+b}$ .

10. Agar  $a=17$ ,  $b=-24$  bo'lsa,  $\frac{a^2 + 2ab + b^2}{2a + 64}$  ifodaning

qiymatini toping.



- A) 0,5;      B)  $\frac{1}{3}$ ;      C) 0,8;      D)  $\frac{2}{3}$ .

11. Ifodani soddalashtiring:  $a + b - \frac{a^2 + b^2}{a - b}$ .

- A) 0;      B)  $-\frac{2b^2}{a - b}$ ;      C)  $-\frac{2a^2}{a - b}$ ;      D) 2.

12. Kasrlarni ko'paytiring:  $\frac{12y}{x^2 - y^2} \cdot \frac{x + y}{3y}$ .

- A)  $\frac{4}{x + y}$ ;      B)  $\frac{1}{3y}$ ;      C)  $\frac{2}{x - y}$ ;      D)  $\frac{4}{x - y}$ .

13. Kasrlarni ko'paytiring:  $\frac{mnk^2}{abc^2} \cdot \frac{(abc)^2}{(mnk)^2}$ .

- A)  $\frac{ab}{m}$ ;      B)  $\frac{a}{mn}$ ;      C)  $\frac{b}{ac}$ ;      D)  $\frac{ab}{mn}$ .

14. Kasrlarni bo'ling:  $\frac{x + 1}{b} : \frac{3x + 3}{b}$ .

- A)  $\frac{1}{3}$ ;      B) 3;      C)  $\frac{1}{3b}$ ;      D)  $\frac{x}{3}$ .

15. Kasrlarni bo'ling:  $\frac{5ab^3}{2c^2} : \frac{ab^3}{c^2}$ .

- A) 2;      B)  $ab$ ;      C) 2,5;      D)  $bc$ .

16. Tenglamani yeching:  $\frac{x}{3} + \frac{x}{5} = 24$ .

- A) 30;      B) 55;      C) 60;      D) 45.

17. Tenglamani yeching:  $\frac{2x+1}{7} - \frac{3x+2}{14} = 2$ .

- A) 21;      B) 28;      C) 27;      D) 14.

18. Ifodani soddalashtiring:  $\left(\frac{a^2+b^2}{a} - 2b\right) : \left(\frac{b}{a} - 1\right)$ .

- A)  $a$ ;      B)  $a-b$ ;      C)  $\frac{1}{a-b}$ ;      D)  $b-a$ .

19. Kasrlarni ko'paytiring:  $\frac{a+b}{x^3+x^2y} \cdot \frac{x^4-x^2y^2}{a^2-b^2}$ .

- A)  $\frac{x-y}{a-b}$ ;      B)  $\frac{x-y}{a+b}$ ;      C)  $\frac{x+y}{a-b}$ ;      D)  $\frac{x+y}{a+b}$ .

20. Ifodani soddalashtiring:  $\left(\frac{x+y}{x-y} + \frac{x-y}{x+y}\right) \cdot \frac{x-y}{x^2+y^2}$ .

- A)  $x^2-y^2$ ;      B)  $\frac{2}{x-y}$ ;      C)  $\frac{2}{x+y}$ ;      D)  $\frac{1}{x+y}$ .

## II-variant

1. Maxraji  $c$  va  $d$  sonlarning ko'paytmasiga, surati esa ular

ayirmasining kvadratiga teng bo'lgan algebraik kasrni aniqlang.

A)  $\frac{c^2 - d^2}{cd}$ ; B)  $\frac{2(c-d)}{cd}$ ; C)  $\frac{(c-d)^2}{cd}$ ; D)  $\frac{cd}{(c-d)^2}$ .

2. Kasrni qisqatiring:  $\frac{7x^5y^2}{35x^5y}$ .

A)  $\frac{y}{7}$ ; B)  $\frac{y}{5}$ ; C)  $\frac{1}{5}$ ; D)  $\frac{x}{5}$ .

3.  $a$  ning qanday qiymatida  $\frac{5a-2}{12}$  kasrning qiymati  $\frac{2}{3}$  ga teng

bo'ladi?

A) 0; B) 4; C) 2; D)  $\frac{1}{5}$ .

4. Agar  $a=3,5$  bo'lsa,  $\frac{a+2}{a-3}$  ifodaning qiymatini toping.

A) 13; B) 12; C) 10; D) 11.

5. Kasrni qisqartiring:  $\frac{8x-32y}{12x-48y}$ .

A)  $\frac{2}{3}$ ; B)  $3x$ ; C)  $\frac{1}{3}$ ; D)  $\frac{2}{3}x$ .

6.  $\frac{4}{5a^3}, \frac{1}{b^2}$  va  $\frac{3}{10a^2b}$  kasrlarning umumiy maxrajini toping.

- A)  $10a^2b^2$ ; B)  $15a^3b^2$ ; C)  $10a^3b^2$ ; D)  $15a^3b^2$ .

7. Kasrni qisqartiring:  $\frac{3x+4y}{9x^2-16y^2}$ .

- A)  $\frac{2}{3x-4y}$ ; B)  $\frac{1}{3x-4y}$ ; C)  $\frac{1}{3x+4y}$ ; D)  $\frac{3}{3x+4y}$ .

8. Kasrlarning yig'indisini toping:  $\frac{b}{a-b} + \frac{a^2-3ab}{a^2-b^2}$ .

- A)  $\frac{b}{a-b}$ ; B)  $\frac{a+b}{a-b}$ ; C)  $\frac{a}{a+b}$ ; D)  $\frac{a-b}{a+b}$ .

9. Kasrlarning ayirmasini toping:  $\frac{a+3}{a^2-1} - \frac{1}{a^2+a}$ .

- A)  $\frac{a+1}{a^2-a}$ ; B)  $\frac{3}{a^2+a}$ ; C)  $\frac{1}{a^2-1}$ ; D)  $\frac{a+1}{a-1}$ .

10. Agar  $m=23$ ,  $n=15$  bo'lsa,  $\frac{3n+83}{m^2-2mn+n^2}$  ifodaning

qiymatini toping.

- A) 0; B) 3; C) 2; D) 1.

11. Ifodani soddalashtiring:  $a+1 - \frac{a^2}{a-1}$ .

A)  $-\frac{1}{a-1}$ ;    B)  $\alpha-1$ ;    C)  $\frac{1}{a-1}$ ;    D)  $\alpha+1$ .

12. Kasrlarni ko'paytiring:  $\frac{6n}{m^2-n^2} \cdot \frac{m+n}{2n}$ .

A)  $\frac{3}{m+n}$ ;    B)  $\frac{1}{m-n}$ ;    C)  $\frac{3}{m-n}$ ;    D)  $\frac{1}{m+n}$ .

13. Kasrlarni ko'paytiring:  $\frac{(abc)^3}{mnk^2} \cdot \frac{2mnk}{a^3b^3c}$ .

A)  $\alpha^2b$ ;    B)  $2c^2k$ ;    C)  $2\alpha^2c$ ;    D)  $c^2k$ ;

14. Kasrlarni bo'ling:  $\frac{2x+1}{a} : \frac{4x+2}{a}$ .

A)  $\frac{1}{2}$ ;    B) 2;    C)  $\frac{1}{a}$ ;    D)  $\alpha$ .

15. Kasrlarni bo'ling:  $\frac{18m^3n^3}{7xy} : \frac{9m^3n^2}{14xy}$ .

A) 4m;    B)  $\frac{2}{m}$ ;    C) 4n;    D) 2n.

16. Tenglamani yeching:  $\frac{x}{2} - \frac{x}{5} = 18$ .

A) 40;    B) 60;    C) 70;    D) 50.

17. Tenglamani yeching:  $\frac{5x+4}{16} - \frac{x+3}{8} = 4$ .

- A) 24;      B) 20;      C) 21;      D) 22.

18. Ifodani soddalashtiring:  $\left(x + \frac{y-x}{1+xy}\right) : \left(1 - \frac{x(y-x)}{1+xy}\right)$ .

- A)  $\frac{1}{y}$ ;      B)  $y$ ;      C)  $x$ ;      D)  $\frac{1}{x}$ .

19. Kasrlarni bo'ling:  $\frac{a^2+b^2}{a^2-ab} : \frac{a^4b-b^5}{a^2b-ab^2}$ .

- A)  $\frac{1}{a^2+b^2}$ ;      B)  $a^2-b^2$ ;      C)  $\frac{1}{a^2-b^2}$ ;      D)  $\frac{ab}{a^2-b^2}$ .

20. Ifodani soddalashtiring:  $\left(\frac{a+b}{a-b} - \frac{a-b}{a+b}\right) \cdot \frac{a+b}{4ab}$ .

- A)  $\frac{1}{a-b}$ ;      B)  $a-b$ ;      C)  $\frac{1}{a+b}$ ;      D)  $\frac{1}{ab}$ .

## 6-§. 7-sinf algebra kursini takrorlash

### Yakuniy test ishi

#### I-variant

1.  $4\frac{5}{7} + 3\frac{5}{6} + 1\frac{2}{7} - 2\frac{5}{6}$  sonli ifodaning qiymatini toping.

- A) 5;                      B) 8;                      C) 7;                      D) 6.

2. Hisoblang:  $(4-5-6+7,2)^2$ .

- A) 0,04;                      B) 0,02;                      C) 0,4;                      D) 0,06.

3. Hisoblang:  $44+6:2\cdot 1,5-0,5$ .

- A) 44,5;                      B) 48,5;                      C) 47;                      D) 48.

4.  $7\frac{1}{2}$  ni hosil qilish uchun qanday sonni  $\frac{5}{9}$  ga ko'paytirish

kerak?

- A)  $11\frac{1}{2}$ ;                      B)  $13\frac{1}{2}$ ;                      C)  $12\frac{1}{2}$ ;                      D)  $13\frac{1}{3}$ .

5. Agar  $a=9$ ,  $b=-10$  bo'lsa,  $\frac{2}{3}a - \frac{3}{5}b$  ifodaning qiymatini toping.

- A) 6;                      B) 0;                      C) 12;                      D) 1.

6. Birhadlarning ko'paytmasini toping:  $(-2a^2b)(-4ab^2)(-a^2b)$ .

- A)  $-8a^5b^4$ ;                      B)  $-6a^5b^4$ ;                      C)  $8a^5b^4$ ;                      D)  $8a^2b^2$ .

7. Birhadni darajaga ko'taring:  $(-0,08x^4y^2)^2$ .

- A)  $-0,64x^8y^4$ ; B)  $-0,64x^6y^4$ ; C)  $0,0064x^8y^4$ ; D)  $0,064x^6y^4$ .

8. Ko'phadlarni ko'paytiring:  $(\alpha^2+3\alpha+1)(\alpha-3)$ .

- A)  $\alpha^3+10\alpha-3$ ; B)  $\alpha^3-9\alpha-3$ ; C)  $\alpha^3+8\alpha+3$ ; D)  $\alpha^3+8\alpha-3$ .

9. Tenglamani yeching:  $\frac{x-7}{2} = x+4$ .

- A) 10; B) -15; C) -5; D) 15.

10. Tenglamani yeching:  $5(2y+1)-2(1+3y)=19$ .

- A) 2; B) 5; C) 3; D) 4.

11. Kasrni qisqartiring:  $\frac{m^2-9}{m^2+5m+9}$ .

- A)  $\frac{m-3}{m+3}$ ; B)  $\frac{m-3}{m}$ ; C)  $\frac{m}{m+3}$ ; D)  $\frac{m+3}{m-3}$ .

12. Kasrni qisqartiring:  $\frac{8+7b}{49b^2-64}$ .

- A)  $\frac{1}{7b+8}$ ; B)  $\frac{8}{7b-8}$ ; C)  $\frac{1}{7b-8}$ ; D)  $\frac{7}{7b+8}$ .

13. Ko'paytuvchilarga ajrating:  $a(b-c)-c(c-b)$ .

- A)  $(b+c)(\alpha-c)$ ; B)  $(b-c)(\alpha+c)$ ; C)  $(b-c)(\alpha-c)$ ; D)  $(b+c)(\alpha+c)$ .

14. Ko'paytuvchilarga ajrating:  $(\alpha+3)^2-(4-5\alpha)^2$ .



- A)  $(6\alpha-1)(7+4\alpha)$ ;                      B)  $(8\alpha+1)(7+4\alpha)$ ;  
 C)  $(6\alpha-1)(7-4\alpha)$ ;                      D)  $(5\alpha+3)(7-2\alpha)$ .

15. Ifodani soddalashtiring:  $(m+2)(m-2)(m^2+4)$ .

- A)  $m^4+16$ ;      B)  $m^4-16$ ;      C)  $m^4-4$ ;      D)  $m^2-4$ .

16. Ifodani soddalashtiring:  $18\alpha^2-14b^2-2ab-17\alpha^2+15b^2$ .

- A)  $(\alpha-b)^2$ ;      B)  $\alpha^2-b^2$ ;      C)  $(\alpha+b)^2$ ;      D)  $\alpha^2+b^2$ .

17. Ota 30 yoshda, o'g'li esa 4 yoshda. Necha yildan keyin otasi o'g'lidan uch marta katta bo'ladi?

- A) 10;      B) 8;      C) 9;      D) 7.

18. Kasrlarning yig'indisini toping.  $\frac{b}{1-a^2} + \frac{b}{a^2-1}$ .

- A) 1;      B) 2b;      C)  $\alpha-1$ ;      D) 0.

19. Kasrlarning ayirmasini toping:  $\frac{a-b}{ab} - \frac{a-c}{ac}$ .

- A)  $\frac{c-b}{bc}$ ;      B)  $\frac{c-b}{ac}$ ;      C)  $\frac{c+b}{bc}$ ;      D)  $\frac{c+b}{ab}$ .

20. Kasrlarni bo'ling:  $\frac{a+b}{a-b} : \frac{a}{a-b} : \frac{a+b}{a}$ .

- A)  $\alpha$ ;      B) -1;      C)  $\alpha+b$ ;      D) 1.

21. Kasrlarni ko'paytiring:  $\frac{7}{39a^2} \cdot 7ba^3$ .

- A)  $7a$ ;      B) 14;      C) 7;      D)  $14a$ .

22. Noma'lum son bilan 1,2 ning yig'indisini 2 va 0,6 sonlar ayirmasiga ko'paytirganda 36,68 hosil bo'ldi. Noma'lum sonni toping.

- A) 24;      B) 25,6;      C) 24,6;      D) 25.

23. Birinchi son 120, ikkinchi son birinchi sondan 1,25 marta kichik, uchinchi son birinchi va ikkinchi sonlar ayirmasining 80 % iga teng. Shu sonlarning o'rta arifmetigini toping.

- A) 82;      B) 80;      C) 79;      D) 81.

24. Amallarni bajaring:  $\frac{a-3}{6} + \frac{7-a}{18} - \frac{a+4}{9}$ .

- A)  $\frac{5}{9}$ ;      B)  $-\frac{5}{6}$ ;      C)  $-\frac{5}{9}$ ;      D)  $\frac{5}{6}$ .

25. Agar  $a = \frac{1}{3}$ ;  $b = -2$  bo'lsa,  $\frac{3a+b}{b-3a}$  ifodaning qiymatini toping.

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

## II-variant

1.  $11\frac{3}{8} + 23\frac{3}{4} + \frac{5}{8} - 13\frac{3}{4}$  sonli ifodaning qiymatini toping.

- A)  $21\frac{5}{8}$ ;      B) 22;      C)  $23\frac{5}{8}$ ;      D) 20.

2. Hisoblang:  $(5-6-7+8,3)^2$ .

- A) 9;      B) 0,009;      C) 0,9;      D) 0,09.

3. Hisoblang:  $46-9:3\cdot 2,5-0,5$ .

- A) 38;      B) 38,5;      C) 37,5;      D) 39.

4.  $6\frac{3}{4}$  ni hosil qilish uchun qanday sonni  $\frac{2}{3}$  ga bo'lish kerak?

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

5. Agar  $x=8$ ,  $y=-15$  bo'lsa,  $\frac{3}{4}x + \frac{2}{5}y$  ifodaning qiymatini toping.

- A) 10;      B) 0;      C) 12;      D) 6.

6. Birhadlarning ko'paytmasini toping:  $(-3m^2n)\cdot(-7mn^2)\cdot(-m^3n^2)$ .

- A)  $21m^6n^5$ ;      B)  $10m^4n^5$ ;      C)  $-10m^6n^5$ ;      D)  $-21m^6n^5$ .

7. Birhadni darajaga ko'taring:  $(-0,09a^5b^3)^2$ .

- A)  $0,0081a^{10}b^6$ ;      B)  $0,81a^{10}b^6$ ;

C)  $0,081a^7b^5$ ; D)  $-0,81a^7b^5$ .

8. Ko'phadlarni ko'paytiring:  $(b^2-4b+1)(b+4)$ .

A)  $b^3+15b+4$ ; B)  $b^2+16b+4$ ;

C)  $b^2+15b-4$ ; D)  $b^3-15b+4$ .

9. Tenglamani yeching:  $x - 9 = \frac{x+6}{4}$ .

A) 16; B) 13; C) 14; D) 15.

10. Tenglamani yeching:  $2(3x-1)+4(1-2x)=16$ .

A) -7; B) -8; C) 7; D) 8.

11. Kasrni qisqartiring:  $\frac{n^2-8n+16}{n^2-16}$ .

A)  $\frac{n-4}{n+4}$ ; B)  $\frac{n+4}{n}$ ; C)  $\frac{m+4}{n-4}$ ; D)  $\frac{n}{n+4}$ .

12. Kasrni qisqartiring:  $\frac{11-9a}{81a^2-121}$ .

A)  $\frac{11}{9a-11}$ ; B)  $-\frac{1}{9a-11}$ ; C)  $\frac{1}{9a-11}$ ; D)  $-\frac{1}{9a+11}$ .

13. Ko'paytuvchilarga ajrating:  $m(k-p)-p(p-k)$ .

A)  $(k-p)(m-p)$ ; B)  $(k-p)(m+p)$ ;

C)  $(k+p)(m+p)$ ; D)  $(k+p)(m-p)$ .

14. Ko'paytuvchilarga ajrating:  $(7b+3)^2 - (2+5b)^2$ .

- A)  $(2b+1)(12b+5)$ ; B)  $(2b+5)(12b-1)$ ;  
C)  $(12b-1)(12b+5)$ ; D)  $(2b-1)(12b-1)$ .

15. Ifodani soddalashtiring:  $(n^2+9)(n-3)(n+3)$ .

- A)  $n^4-64$ ; B)  $n^4+81$ ; C)  $n^4-81$ ; D)  $n^2-81$ .

16. Ifodani soddalashtiring:  $17a^2+2ab+14b^2-16a^2-13b^2$ .

- A)  $(a+b)^2$ ; B)  $(a-b)^2$ ; C)  $a^2-b^2$ ; D)  $2(a^2+b^2)$ .

17. O'g'il 6 yoshda, otasi esa undan 6 marta katta. Necha yildan keyin o'g'li otasidan 4 marta yosh bo'ladi?

- A) 5; B) 6; C) 4; D) 3.

18. Kasrlarning yig'indisini toping:  $\frac{m}{n^2-1} + \frac{m}{1-n^2}$ .

- A) 0; B)  $2m$ ; C) 1; D)  $1-n^2$ .

19. Kasrlarning ayirmasini toping:  $\frac{3}{a+b} - \frac{3}{a-b}$ .

- A)  $\frac{3b}{a^2-b^2}$ ; B)  $\frac{6}{a^2-b^2}$ ; C)  $-\frac{1}{a^2-b^2}$ ; D)  $-\frac{6b}{a^2-b^2}$ .

20. Kasrlarni bo'ling:  $\frac{1}{a+b} : \frac{3}{a^2-b^2} : \frac{a-b}{6}$ .

- A)  $a+b$ ; B) 2; C) 1; D)  $a-b$ .

21. Kasrlarni ko'paytiring:  $225m \cdot \frac{m}{15m^2}$ .

- A) 25;            B)  $m^2$ ;            C) 15m;            D) 15.

22. Noma'lum son bilan 0,9 sonlarining ayirmasini 1 va 0,4 ning yig'indisiga ko'paytirsak, 2,618 hosil bo'ladi. Noma'lum sonni toping.

- A) 6,4;            B) 2,77;            C) 1,68;            D) 6,67.

23. Birinchi son 60, ikkinchi son birinchidan 2,5 marta katta, uchinchi va ikkinchi sonlar yig'indisining 40 % ini tashkil qiladi. Shu sonlarning o'rta arifmetigini toping.

- A) 93;            B) 98;            C) 96;            D) 94.

24. Amallarni bajaring:  $\frac{a+4}{4} + \frac{9-2a}{16} - \frac{a+5}{8}$ .

- A)  $\frac{5}{16}$ ;            B)  $\frac{7}{8}$ ;            C)  $\frac{15}{16}$ ;            D)  $\frac{5}{8}$ .

25. Agar  $a = -\frac{1}{7}$ ,  $b=4$  bo'lsa,  $\frac{7a-b}{b+7a}$  ifodaning qiymatini toping.

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

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*Ilmiy-uslubiy nashr*

Sirojiddin Turdaliyev

**7-SINF UCHUN**

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Umumiy o'rta ta'lim maktablari matematika o'qituvchilari uchun

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