



TEST VARIANTI RAQAMI: **1910941**

MATEMATIKA

Ushbu test varianti 30 ta test topshirig'idan iborat. Uni bajarishga 1 soat vaqt belgilash tavsiya etiladi. Natijani bilish uchun javoblaringizni javoblar varaqasiga belgilab, rasmini [@dtmxizmatbot](#) orqali jo'nating. Sizga omad tilaymiz!

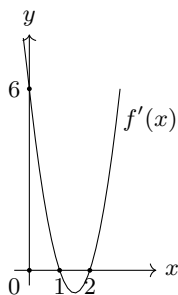
TEST VARIANTI RAQAMINI JAVOBLAR VARAQASIGA TO'G'RI KO'CHIRING!

1	9	1	0	9	4	1
2	2	2	2	2	2	2
3	3	3	3	3	3	3
4	4	4	4	4	4	4
5	5	5	5	5	5	5
6	6	6	6	6	6	6
7	7	7	7	7	7	7
8	8	8	8	8	8	8
9	9	9	9	9	9	9
0	0	0	0	0	0	0

1. $-1,25$ soniga qarama-qarshi bo'lgan sonning teskarisi $0,1$ dan qanchaga katta?
A) $0,7$ B) $0,4$ C) $0,3$ D) $1,15$
2. Tengsizlikni yeching:
 $\sqrt[3]{(x-2)^3} + \sqrt[4]{(x-2)^4} \leq 2-x$.
A) $(-\infty; 2]$ B) \emptyset C) $[2; \infty)$ D) $\{2\}$
3. 6 ta to'g'ri chiziqlar ko'pi bilan tekislikni nechta qismga ajratadi?
A) 21 B) 15 C) 22 D) 16
4. $y = \sqrt{1,44 - x^2}$ funksiya grafigiga o'tkazilgan urinma absissa o'qini $(-2; 0)$ nuqtada kesib o'tsa, uning tenglamasini toping.
A) $y = \frac{2}{3}x + \frac{4}{3}$ B) $y = \frac{3}{4}x + \frac{3}{2}$
C) $y = \frac{3}{5}x + \frac{6}{5}$ D) $y = \frac{4}{5}x + \frac{8}{5}$
5. Soatning soat mili ikki soatda necha gradusga buriladi?
A) 120° B) 60° C) 75° D) 90°
6. $y = -x^2 + bx + c$ kvadrat funksiyaning eng katta qiymati -2 ga teng va unga $x = 2$ nuqtada erishadi. bc ni toping.
A) -18 B) 18 C) -24 D) 24
7. Ikkita to'g'ri chiziq kesishganidan hosil bo'lgan burchaklardan biri ikkinchisidan 36° ga katta bo'lsa, ularning nisbatini toping.
A) $5:4$ B) $6:5$ C) $3:2$ D) $4:3$
8. To'g'ri to'rtburchak shaklidagi yer maydonning to'rtta tomoni 360 m uzunlikdagi devor bilan o'ralgan. Bu yer maydonining eng katta yuzasi necha m^2 bo'ladi?
A) 8100 B) 3240 C) 32400 D) 81000
9. $13^5 - 13$ ni 10 ga bo'lgandagi qoldiqni toping.
A) 6 B) 3 C) 7 D) 0

10. Agar $0 < \alpha, \beta < \frac{\pi}{2}$ lar uchun $tg\alpha = \frac{1}{2}$ va $\sin\beta = \frac{15}{17}$ bo'lsa, $\sin 2\alpha + tg\frac{\beta}{2}$ ni hisoblang.
A) $\frac{7}{5}$ B) $\frac{5}{2}$ C) $\frac{2}{5}$ D) $\frac{5}{7}$
11. $\log_2(x+1) + \log_2(8-x) > 3$ tengsizlikni yeching.
A) $(0; 7)$ B) $(-1; 0) \cup (7; 8)$ C) $(-1; 8)$
D) $(7; 8)$
12. Ifodani soddalashtiring:
 $\left(\frac{\sqrt[4]{m}-4}{\sqrt[4]{m}+4} - \frac{\sqrt[4]{m}+4}{\sqrt[4]{m}-4}\right)^{-1} \cdot \left(\frac{4\sqrt[4]{m}}{\sqrt[4]{m}-4}\right)$
A) $-\sqrt[4]{m}-4$ B) $\frac{\sqrt[4]{m}+4}{4}$ C) $-\frac{\sqrt[4]{m}+4}{4}$
D) $-4(\sqrt[4]{m}+4)$
13. $y = 3^{x-3} + 12$ funksiyaning qiymatlar sohasini toping.
A) $[12; \infty)$ B) $(-\infty; \infty)$ C) $(12; \infty)$
D) $(15; \infty)$
14. $(7; -12)$ nuqtaning koordinatalar boshiga nisbatan simmetrik bo'lgan nuqtasini toping.
A) $(-7; -12)$ B) $(-7; 12)$ C) $(12; -7)$
D) $(7; 12)$
15. Ko'paytuvchilarga ajrating: $ac - bc + b^2 - ab$
A) $(a-b) \cdot (b+c)$ B) $(a-b) \cdot (b-c)$
C) $(a-b) \cdot (c-b)$ D) $(b-a) \cdot (c+b)$
16. $\frac{\sqrt{11}-4}{\sqrt{\sqrt{11}-3}+1} - \frac{\sqrt{11}-12}{\sqrt{\sqrt{11}-3}-3}$ ni hisoblang.
A) -4 B) -2 C) 2 D) 4

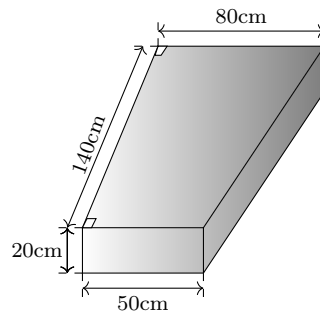
17. Rasmda $f'(x)$ kvadrat funksiyaning grafigi tasvirlangan. Uning boshlang'ich funksiyasi uchun $f(0) = 0$ bo'lsa, u holda $f(2)$ ni toping.



- A) 0 B) 3 C) 1 D) 2
18. Agar $x = 2n + 1$ (n – natural son) bo'lsa, $\frac{(-1)^{x+1} + (-1)^{2x}}{(-1)^x}$ ifodaning qiymatini aniqlang.
A) -2 B) -2 yoki 0 C) 2 D) 0
19. a va b natural sonlar uchun $a + \frac{b}{3} = 10$ bo'lsa, u holda ab ifodaning eng katta qiymatini toping.
A) 54 B) 75 C) 63 D) 72
20. Agar $\sin \alpha = -\frac{2}{5}$ bo'lsa, $\frac{\sin 2\alpha - \sin 3\alpha + \sin 5\alpha}{1 + \cos \alpha - 2 \sin^2 2\alpha}$ ning qiymatini toping.
A) $\frac{2}{5}$ B) $-\frac{4}{5}$ C) $-\frac{2}{5}$ D) $\frac{5}{4}$
21. 4 m^2 12 dm^2 16 cm^2 necha cm^2 ga teng?
A) 52016 B) 41216 C) 40136 D) 43016
22. Tenglamani yeching.
$$\frac{\frac{x+2}{2} - 3}{2 + \frac{1}{2}} - \frac{\frac{x-6}{3} + 2}{4 - 2\frac{1}{3}} = \frac{\frac{x}{6} + 4\frac{1}{3}}{(1,2)^{-1}}$$

A) 30 B) $\frac{1}{15}$ C) $-\frac{1}{15}$ D) -30
23. Ketma-ketlikning istalgan 2 ta ketma-ket hadining yig'indisi 10 ga teng. Agar uchinchi hadi 7 ga teng bo'lsa, ketma-ketlikning dastlabki to'qqizta hadi yig'indisini toping.
A) 43 B) 37 C) 47 D) 45

24. Rasmda tasvirlangan to'g'ri prizmaning hajmini (dm^3) toping.



- A) 182 B) 169 C) 156 D) 196
25. Uchlari Oxy tekisligining $(0; 0)$, $(0; 2)$, $(4; 2)$ va $(1; 0)$ nuqtalarida bo'lgan to'rtburchakni Ox o'qi atrofida aylantirishdan hosil bo'lgan jismning hajmini toping.
A) 9π B) 6π C) 8π D) 12π
26. -3 ; 6 ; 8 va x sonlarining o'rta arifmetigi y ning $\frac{1}{3}$ qismiga teng. Agar $3x - 2y = 15$ bo'lsa, y ning qiymatini toping.
A) 32 B) 24 C) 28 D) 18
27. A va B to'plamlarning elementlari mos ravishda 24 va 36 sonlarining natural bo'luvchilaridan iborat bo'lsa, $A \cap B$ to'plamning elementlari sonini aniqlang.
A) 8 B) 12 C) 6 D) 4
28. $f(x) = kx + 2$ funksiya k ning qanday qiymatlarida kamayuvchi bo'ladi?
A) $k < 0$ B) $k > 0$ C) $k = 2n - 1, n \in \mathbb{N}$
D) $k \in \mathbb{R}$
29. $\sqrt[3]{(x+4)^2} + 4\sqrt[3]{(x-3)^2} + 5\sqrt[3]{x^2+x-12} = 0$ tenglama nechta haqiqiy ildizga ega?
A) 0 B) 2 C) 3 D) 1
30. $ABCD$ parallelogrammda D o'tmas burchak. E nuqta AB tomonda yotadi. $BCDE$ to'rtburchak yuzining DAE uchburchak yuziga nisbati 5:3 kabi bo'lsa, $AE:EB$ nisbatni toping.
A) $\frac{2}{3}$ B) 3 C) $\frac{3}{2}$ D) $\frac{3}{4}$

Test varianti “Test topshiriqlari to‘plami 2019” asosida shakllantirilgan:

1 – 12-bet 19	7 – 90-bet 5	13 – 55-bet 31	19 – 14-bet 41	25 – 113-bet 56
2 – 69-bet 25	8 – 80-bet 31	14 – 115-bet 14	20 – 38-bet 36	26 – 20-bet 40
3 – 123-bet 4	9 – 8-bet 18	15 – 46-bet 16	21 – 19-bet 28	27 – 119-bet 6
4 – 82-bet 48	10 – 44-bet 93	16 – 25-bet 35	22 – 60-bet 14	28 – 71-bet 12
5 – 97-bet 57	11 – 58-bet 33	17 – 87-bet 20	23 – 32-bet 22	29 – 64-bet 55
6 – 76-bet 72	12 – 50-bet 49	18 – 24-bet 22	24 – 110-bet 30	30 – 101-bet 88