**10−sinf MATEMATIKA**

1. $2x^{2}-2ax+1=0$ kvadrat tenglama ildizlari uchun

$$\left(\frac{2x\_{1}}{x\_{1}+x\_{2}+1}\right)^{2}+\left(\frac{2x\_{2}}{x\_{1}+x\_{2}+1}\right)^{2}=3$$

tengliko`rinlibo`lsa, a ni toping.

A) 1 B) −3 C) −1 D) 7

2. Korxonaxom−ashyuoqimmatlashganisabablimaxsulotnarxi 20% gaoshirildi, biroqmijojlarsoni 20 % gakamayibketdi. Shundakorxonanarxniqanchadirfoizgakamaytiribmijozlarisonini 25% gaoshirishgaerishdi. Shundankeyinkorxonatushuminarxo`zgarmasdanoldingitushumgaqaraganda 8% gaoshganbo`lsa, yanginarxnechafoizgakamaytirilgan?

A)10 B) 20 C) 12 D) 4

3) { x/xϵN, x2< 32 } to’plamninechtausulbilanikkitakesishmaydiganqismto’plamlarbirlashmasiko’rinishidaifodalashmumkin?
A) *5* B) *31* C) *32* D) *16*

4. $\left|\frac{5}{2x-6}\right|>\frac{7}{9}$ tengsizlik yechimi bo`la oladigan tub sonlar nechta?

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

5. Berilganfunksiyagateskarifunksiyanianiqlang.$f\left(x\right)=x^{2f^{2}\left(x\right)+f(x)}$

A) $f^{-1}\left(x\right)=x^{\frac{1}{2x^{2}+x}}$ B$) f^{-1}=x^{2x^{2}+x}$C) $f^{-1}(x)=x^{x^{2}+2x}$ D) aniqlab bo`lmaydi.

6. Ko`paytmanihisoblang.$cos12^{o}cos24^{o}cos36^{o}cos48^{o}cos60^{o}cos72^{o}cos84^{o}$

A) 1/128 B) 1/16 C) 1/32 D) 1/64

7) Tenglamaning ildizini nimchoragi nechaga teng ?



A) 0,125 B) 0,5 C)0,25 D) 

8) Hisoblang: $cos\frac{4π}{7}∙cos\frac{5π}{7}∙cos\frac{8π}{7}$

A) − $\frac{1}{8}$ B) −$\frac{1}{4}$ C) $\frac{1}{8}$ D) $\frac{1}{4}$

9)$y=\sqrt[4]{\frac{7-x}{\sqrt[6]{4x^{2}-19x+12}}}$ funksiyaning aniqlanish sohasini toping.

A) $\left[\frac{3}{4};7\right]$

B) $\left(\frac{3}{4};4\right)$

C)$\left(-\infty ;\frac{3}{4}\right)∪\left(4;\right.\left.7\right]$

D) $\left(\frac{3}{4};7\right)$

10) $\left[2x-1\right]=x$ tenglamani butun yechimlar sonini toping. Bu yerda $\left[a\right]$− a soniningbutunqismi.

A) 3 ta B) 4ta C) 1 ta D) 2 ta

11) x$=\frac{\sqrt{11}+1}{2}$ bo`lsa, $\frac{x^{3}-3x^{2}+6,5x-2}{x^{2}-x+1}$ kasrning qiymatini hisoblang.

A) 2−$\sqrt{11}$ B) $\sqrt{11}$−2 C) $\sqrt{11}-1$ D) $\sqrt{11}+1$

12) Agar f(g(x))=$x^{2}-6x+6$ va f(x)=x−3 funksiyalar berilgan bo`lsa, g(x) funksiya ko`rinishini aniqlang.

A) (x−3)2 B) x2+12x+3

C) x2−12x−3 D) (x+3)2

13) Uchburchakningtomonlari 7 va 11 ga, uchinchitomoniningmedianasi gat eng.Uchburchakninguchunchitomonini toping.

A) 12 B) 14 C) 15 D) 16

14) Ta`lim muassasida barcha o`quvchilar kamida bitta ingliz yoki nemis tilida so`zlash oladilar. Ayrimlari ikkala tilni ham biladilar.O`quvchilarning 85%i ingliz tilini, 75%i nemis tilini biladilar. Ikkala tilni ham biladigan o`quvchilar barcha o`quvchilarning necha % ini tashkil etadi.

A) 50% B) 60% C) 70 % D) 65%

15) 7(kx−2)=7k+2(x−8) tenglama k ning qanday qiymatlarida ildizga ega bo`lmaydi?

A) (−∞; 2/7) B) (2/7; ∞) C) k=$\frac{2}{7}$ D) $∅$

16) tengsizlikniyeching.$log\_{\sqrt{3}}\left(2x-1\right)<log\_{\sqrt{3}}\left(x^{2}+6x+9\right)$

A) $\left(\frac{2}{3};2\right)$ B) $\left(\frac{5}{3};2\right)$ C) $\left(\frac{1}{2};\infty \right)$ D) $\left(\frac{4}{3};3\right)$

17) 3cos2x-3$\sqrt{3}$sin2x=0 trigonometrik tenglamani yeching.

A$) \frac{π}{12}+\frac{πk}{2}; k\in Z$) $B) \frac{π}{6}+πk; k\in Z$ $C)\frac{π}{12}+2πk; k\in Z$

D) $\frac{π}{12}+πk; k\in Z$

18) $\frac{1+cos3α+cos2α+cosα}{2cos^{2}α+cosα-1}$ ifodani soddalshtiring.

A) cosα B) 1 C) 2cosα D) 2sinα

19 ) Hisoblang: cos25ocos35ocos85o=

A) $\frac{\sqrt{2-\sqrt{3}}}{16}$ B) $\frac{\sqrt{2-\sqrt{3}}}{8}$C) $\frac{\sqrt{2+\sqrt{3}}}{16}$ D) $\frac{\sqrt{2+\sqrt{3}}}{8}$

20) Uchburchakning ikkita burchagi mos ravishda 38o va 52oga teng. Uchinchi burchagi uchidan tushirilgan bissektrisa va mediana orasidagi burchakni toping.

A) 10oB) 17o C) 7o D) 14o

21) Agar f(x+1) =7+3x funksiya uchun f (a)=2 tenglik o`rinli bo`lsa, a ning qiymatini toping.

 A) 10 B) 12 C) −2/3 D) 8

22) Beshta a1, a2, a3, a4, a5 tub sonlar ayirmasi 6 ga teng bo`lgan arifmetik progressiyani tashkil qiladi. 2a2+a3ni toping.

A) 31 B) 40 C) 39 D) 43

23.  tenglama  ning qanday qiymatlarida o‘rinli.

A) 343 B) 3 C) 9 D) 729

24.  tenglama ildizlari yig‘indisini toping.

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

25. Tenglama ildizlarining o‘rta arifmetik qiymatini toping:



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

26.  ko‘phadning bir ko‘paytuvchisi  bo‘lsa,  ni toping.

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

27. Tengsizlikning butun yechimlarining o‘rta arifmetik qiymatini toping:



A)  B)  C)  D) -3

28. Hisoblang: 

A)  B)  C)  D) 

29. Sonlarni o‘sish tartibida joylashtiring: .

A)  B)  C)  D) 

30. Agar  bo‘lsa,  ni toping.

A) -5 B) -7 C) -3 D) -1

31.  ko‘phadni standart ko‘rinishda ifodalangandagi koeffitsientlar yig‘indisini toping.

A)  B)  C)  D) 1

32. Hisoblang: 

A)  B)  C)  D) 

33.  ning qanday qiymatlarida  kvadrat tenglamaning ildizlari yig‘indisi manfiy bo‘ladi?

A)  B)  C)  D) 

34. Ninachi va chivin to‘g‘ri chiziq bo‘ylab harakatlanmoqda. Ninachi chivinni quvib yetmoqchi. Ninachining tezligi 1,2 m/s va chivinniki 30 sm/s. Necha sekunddan so‘ng ular orasidagi masofa 6,5 m dan 20 sm gacha qisqaradi?

A) 5 s B) 6 s C) 7 s D) 10 s

35. Teng yonli uchburchakning asosi 12 sm, yon tomoni 18 sm. Yon tomonlariga bissektrisalar tushirilgan. Bissektrisalarning tomonlari bilan kesishgan nuqtalari orasidagoi masofani toping.

A) 5,6 sm B) 6,4 sm C) 7,2 sm D) 8,1 sm

36. Hisoblang: 

A)  B)  C)  D) 

37.  tenglamaning ildizi qaysi oraliqda joylashgan?

A)  B  C)  D) 

38.  tenglamalar sistemasining yechimlari  bo‘lsin.  ayirmani toping.

A) 4 B) -5 C) -3 D) -4

39.  tengsizlikning yechimlari joylashgan interval uzunligini toping.

A) 1,45 B) 1,35 C) 1,15 D) 1,25

40.  tengsizlikning eng katta butun yechimini toping.

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

**10-синф**

Javoblar

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| D | A | D | C | A | A | A | A | C | C | C | A | D | B | D | C | A | C | $$\frac{\sqrt{2-\sqrt{3}}}{8}$$ |  7o | −2/3  | 39 |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| D | C | A | A | A | C | D | B | D | C | D | C | C | A | D | D | D | C |