1 $3\cdot 5^{\lg 1}-3^{\lg 25}+5^{\lg 9}$ ifodaning qiymatini toping. 1

- 3 100%
- 1
- 7
- 5

2 $\cos^2\left(\frac{2\pi}{3}+2\alpha\right)+\cos^2\left(\frac{2\pi}{3}-2\alpha\right)+\cos^2 2\alpha$ ni soddalashtiring.

- 0,5
- 1,5 100%
- $\cos^2 2\alpha$
- 0,75

3 $\frac{3\sqrt{2}-\sqrt{12}}{2-\sqrt{6}}\cdot x>1$ tengsizlikni yeching.

- $x>-\frac{\sqrt{3}}{3}$
- $x<1$
- $x<-\frac{\sqrt{3}}{3}$ 100%
- $x>1$

4 $\sqrt[3]{x-1}+\sqrt[6]{x^2-1}=\sqrt[3]{x+1}$ tenglamani yeching.

- $\pm\frac{\sqrt{5}}{2}$ 100%
- $\sqrt{5}$
- $\frac{\sqrt{5}}{2}$
- $\sqrt{3}$

5 To`g`ri to`rtburchakning tomonlari 1:3 nisbatda. To`g`ri to`rtburchak yuzining unga tashqi chizilgan doira yuziga nisbatini toping.

- $\frac{6}{5\pi}$ 100%
- $\frac{2}{3\pi}$
- $\frac{3}{5\pi}$
- $\frac{3}{4\pi}$

---

6 $2-cosx=\frac{1}{1+x^2}$ tenglamaning nechta ildizi bor?

- 2
- 0
- 1 100%
- 3

---

7 $\begin{cases} x+y+z=5 \\ xy+xz=4 \\ yx+yz=6 \end{cases}$ tenglamalar sistemasining nechta yechimlar uchligi bor?

- 2 ta
- 4 ta 100%
- 3 ta
- 1 ta

---

8 Ifodani soddalashtiring. $\frac{x-0,(3)}{\sqrt[3]{x^2}+\sqrt[3]{0,(3)x}+\sqrt[3]{0,(1)}}$;

- $\sqrt[3]{x}-\sqrt[3]{3^{-1}}$ 100%
- $\sqrt[3]{x}-\sqrt[3]{3}$
- $\sqrt[3]{x}+\sqrt[3]{3^{-1}}$

- $\sqrt[3]{x}+\sqrt[3]{3}$

9 Tenglamani yeching va ildizlari yig`indisini toping: $x(3^x+2)=3(1-3^x)-x^2$.

- -3 100%
- -4
- 0
- -2

10 Tenglamani yeching: $6\cdot 5^{\log_3 x}+2\cdot 5^{\log_3 x-1}=3\cdot 4^{\log_3 x+1}+2^{\log_{\sqrt{3}} x-1}$.

- 3
- 81
- 27 100%
- 9

11 $\frac{\sqrt{x+1}}{\log_4|x-2|}\geq 0$ tengsizlikni qanoatlantiruvchi eng kichik natural sonni toping.

- 3
- 4 100%
- 1
- 5

12 $\log_{x^2-1}(x^4+3x^2)=\log_{x^2-1}(2x^3+6x)$ tenglamaning nechta yechimi bor?

- 1 ta 100%
- 4 ta
- 2 ta
- 3 ta

13 Natural sonlardan birini ikkinchisiga bo`lganda, shunday o`nli kasr hosil bo`ldiki, uning butun qismi bo`luvchiga, kasr qismi esa bo`linuvchiga teng bo`ldi. Bo`luvchini

toping.

- 5
- 10
- 2 100%
- 3

---

14 Aylanani 7; 13; 18; 22 sonlariga proporsional yoylarga bo‘lganda, ularning burchaklarini toping.

- $56^\circ; 78^\circ; 115^\circ; 145^\circ$
- $42^\circ; 78^\circ; 108^\circ; 132^\circ$ 100%
- $49^\circ; 75^\circ; 95^\circ; 141^\circ$
- $49^\circ; 89^\circ; 91^\circ; 131^\circ$

---

15 Teng yonli to`g`ri burchakli uchburchakka ichki chizilgan doiraning radiusi r bilan, perimetrining yarmi esa p bilan belgilandi. Gipotenuzani toping.

- $r-p$
- $p+r$
- $p-r$ 100%
- $2p-r$

---

16 $y=\frac{x^2+6x+21}{11+6x+x^2}$ funksiyaning eng kichik butun qiymatini toping.

- 2 100%
- 6
- 4
- 1

---

17 $(((-1,75)-(-3,25))\cdot 0,48+(-0,3)):(-0,028)$ ni hisoblang.

- 15
- -5

- -15 100%
- 5

18 $2log_{1/3}27-3log_{1/6}6+log_{1/5}125$ ni hisoblang.

- -12
- 0
- -6 100%
- 6

19 $0,2^{x^2+7x+4,5}=5\sqrt{5}$ tenglamani yeching.

- -1; -6 100%
- 1; 6
- 1; -6
- -1; 6

20 $x^2+14x+y^2-10y+38=0$ tenglama bilan berilgan aylana chegaralab turgan soha yuzini toping.

- 36π 100%
- 25π
- 64π
- 49π

21 $f(x)=72cos9x\cdot cos27x$ uchun boshlang`ich funksiyani toping.

- $2cos18x-cos36x+C$
- $2sin18x+sin36x+C$ 100%
- $-2cos18x-cos36x+C$
- $2sin18x-sin36x+C$

22 $\cos 2x=\sin^2 x$ tenglamani yeching.

- $\arcsin\frac{1}{3}+2k\pi$; $k\in Z$
- $\pm\arccos\frac{1}{3}+2k\pi$; $k\in Z$
- $\pm\frac{1}{2}\arccos\frac{1}{3}+k\pi$; $k\in Z$ 100%
- $\arccos\frac{2}{3}+2k\pi$; $k\in Z$

---

23 $f(x)=5x^2+3x-12$ funksiya hosilasini toping.

- $10x+3$ 100%
- $10x^3+3x-12$
- $\frac{5}{3}x^3+\frac{3x^2}{2}-11x$
- $10x-3$

---

24 $(9^2-1^2)(8^2-2^2)(7^2-3^2)\dots(1^2-9^2)$ ko`paytmani hisoblang.

- 0 100%
- 10000
- 86420000
- 480000

---

25 $y=\frac{8}{3}\sqrt{x}$, $y=-x^3$ va $y=8$ chiziqlar bilan chegaralangan yopiq figura yuzini hisoblang.

- 48
- 36 100%
- 32
- 42

---

26 $f(x)=(2x-4)^7$ funksiyaning hosilasini toping.

- $14(4+2x)^6$
- $-14(4-2x)^6$
- $14(4-2x)^6$ 100%
- $-14(4+2x)^6$

27 $\begin{cases} x^2+y^2=2(xy+2) \\ x+y=6 \end{cases}$ tenglamalar sistemasidan $|x-y|$ ni toping.

- 2 100%
- 0
- 1
- 3

28 $7^x \cdot \left(\sqrt{2}\right)^{2x^2-6} - \frac{7^x}{2^{2x}} = 0$ tenglamaning katta ildizini toping.

- 1100%
- -4
- 3
- -3

29 To`g`ri parallelepipedning asosi rombdan iborat bo`lib, parallelepiped diagonal kesimlarining yuzlari $S_2$ va $S_1$ bo`lsa, parallelepiped yon sirtining yuzini toping.

- $\frac{1}{2}\sqrt{S_1^2+S_2^2}$
- $S_1^2+S_2^2$
- $2\sqrt{S_1^2+S_2^2}$ 100%
- $\sqrt{S_1^2+S_2^2}$

30 Katetlari $3-2\sqrt{5}x+x^2=0$ tenglama ildizlariga teng bo`lgan to`g`ri burchakli uchburchakning yuzini toping.

- 2

- 1,5 100%
- 4
- 5

31 Bir to`g`ri chiziqda ketma-ket yotuvchi A, B, C va D nuqtalar uchun $AB = CD$ va $BC = 12$ ekanligi ma'lum. Bu to`g`ri chiziqda yotmaydigan E nuqtadan B va C nuqtalargacha bo`lgan masofa 10 ga teng. Agar AED uchubrchakning perimetri BEC uchburchakning perimetridan ikki marta katta bo`lsa, AB ni toping.

- 9 100%
- 7,5
- 8,5
- 8

32 $A(x) = a(x-2)\cdot(x+2) + 2(x^2 - bx + 3)$ va $B(x) = bx^2 - 8x - 4a + 6$ ko`phadlar aynan teng bo`lsa, a va b larni toping.

- $a = 2$, $b = 4$ 100%
- $a = -2$, $b = 4$
- $a = 2$, $b = -4$
- $a = -2$, $b = -4$

33 $f(x) = \frac{1}{x-4} + \frac{x}{4} + \frac{1}{4}$ bo`lsa, funksiya uchun $f(a) = 0$ bo`lsa, a ni toping.

- 0 va -5
- 0
- 0 va 3 100%
- -5

34 8 $\int_0^{\frac{\pi}{12}} sinx \cdot cosx \cdot cos2x dx$ ni hisoblang

- $\frac{1}{2}$
- $\frac{1}{4}$ 100%
- $-\frac{1}{2}$
- 1

35 $\left(\frac{2log_6 2+log_6 27}{log_6\sqrt[3]{0,25}+log_6\frac{1}{3}}\right)^2$ ni hisoblang.

- 9 100%
- 18
- $9log_6 27$
- 27

36 5484042 soni quydagi qaysi songa qoldiqsiz bo'linadi?

- 4
- 6 100%
- 5
- 8

37 Funktsiya grafiklarining kesishuv nuqtasining absissasini toping <!--[if !msEquation]-->
$y_1 = \log_3(x+7)\ y_2 = 2+\log_3(x-1)$

- 1
- 2 100%
- -1
- -2

38 Motosiklchi 50km masofani 45 minutda bosib o'tadi. Velosipedchi 40km masofani 4 minutda bosib o'tsa, velosipedchining tezligi motosikl tezligining nechi foiziga teng

- <!--[if !msEquation]--> 33,2%
- <!--[if !msEquation]--> 31,3%
- <!--[if !msEquation]--> 22,5%100%
- <!--[if !msEquation]--> 20,8%

---

39 Tenglamani yeching <!--[if !msEquation]--> $e^{ln^2x} + 9x^{lnx} = 27$

- e
- <!--[if !msEquation]--> $e; \frac{1}{e}$ 100%
- <!--[if !msEquation]--> $e^2; \frac{1}{e^2}$
- <!--[if !msEquation]--> e^2

---

40 Hisoblang 0,04((2,46-1,12) : 0,2 + 3,3)

- 0,5
- 0,2
- 0,4 100%
- 0,8

1 $3^{log_4 5} - 5^{log_4 3} + 7^{log_8 1}$ ifodaning qiymatini toping. 2

- 1100%
- 2
- 4
- 3

---

2 $y = 3sin2x + sin6x$ funksiyaning hosilasini toping.

- $12cos2x \cdot cos4x$ 100%
- $12sin2x \cdot sin4x$
- $-12cos2x \cdot sin4x$
- $12sin2x \cdot cos4x$

3 Agar $x^2y+xy^2=6$ va $x^3+y^3=9$ bo`lsa, $x+y$ ni toping.

- 9
- $\sqrt{3}$
- 3 100%
- 1

4 $2\sqrt{1-x^2}=x-2$ tenglamani yeching.

- $\varnothing$ 100%
- 0; $\frac{4}{5}$
- $\frac{4}{5}$
- 0

5 $\frac{6x-30}{x-4}+\frac{x-4}{x-5}=5$ tenglamani yeching.

- 5,5; 6 100%
- 6,5; 6
- -5,5; 6
- -5,5; -6

6 $\begin{cases}\frac{1}{a}+\frac{4}{b}=\frac{1}{2},\\ \frac{2}{a}+\frac{3}{b}=\frac{4}{5}\end{cases}$ bo`lsa, $b-?$

- 17
- 25 100%
- 134
- 50

7 $\frac{x^2-x}{x^2-x-1}-1=\frac{x^2-x+2}{x^2-x-2}$ tenglama ildizlarining o`rta arifmetigini toping.

- 2
- 1
- 0,5 100%
- 1,5

8 Nechta $(m;n)$ natural sonlar $(m>n)$ juftligi $\begin{cases} EKUB(m;n)=5 \\ m+n=20 \end{cases}$ sistemani qanoatlantiradi?

- 1 100%
- 4
- 3
- 2

9 Arifmetik progressiyada $d=6$, $n=40$, $a_n=254$ bo`lsa, a_2 ni toping.

- 20
- 26 100%
- 40
- 10

10 $(x^2+25x+25)(x^2+x+25)=25x^2$ tenglama haqiqiy ildizlari yig`indisini toping.

- -25
- -27
- -26 100%
- -24

11 $|x^2-5ax|=15a$ tenglama a ning qanday qiymatlarida faqat 2 ta manfiy ildizga ega?

- $\varnothing$ 100%
- 3
- $(0;2,4)$
- 2,4

12 Parallelogramm diagonallarining uzunliklari 6 va 8 ga teng bo`lib, ular o`zaro perpendikular bo`lsa, unga ichki chizilgan doira yuzi aniqlansin.

- $5,76\pi$ 100%
- $4,84\pi$
- $6,76\pi$
- $5,29\pi$

13 Tengsizlikni yeching: $3^{2x}\cdot x^2+5x-6\le x^2+5x\cdot 3^{2x}-2\cdot 3^{2x+1}$.

- $[0;2]\cup[3;+\infty)$
- $(-\infty;0]\cup[2;3]$ 100%
- $(-\infty;0]\cup\{2\}\cup[3;+\infty)$
- $[0;2]\cup\{3\}$

14 Asoslari 8 sm va 10 sm, balandligi 4 sm bo`lgan trapetsiyaga tengdosh uchburchakning asosi 4,5 sm. Shu uchburchakning balandligini toping.

- 12 sm
- 14 sm
- 16 sm 100%
- 18 sm

15 Kutubxonada jami 3275~ta kitob bor. Jami kitoblarning 40 foizi badiiy kitoblar, qolgan qismi darsliklar. Darsliklar sonini toping.

- 1965 100%
- 1967
- 1970

- 1960

16 $\frac{3^x}{3^x-1} \le \frac{1}{3^x+1} + \frac{2\cdot 3^x}{3^{2x}-1}$ tengsizlikni qanoatlantiruvchi eng katta butun sonni toping.

- -3
- -4
- -1 100%
- -2

17 Ifoda qiymatining oxirgi raqamini toping. $5\cdot\left|2015^{2013}-2014^{2014}\right|+7$

- 8
- 2 100%
- 4
- 6

18 Teng yonli to`g`ri burchakli uchburchakka ichki chizilgan doiraning radiusi r bilan, perimetrining yarmi esa p bilan belgilandi. Gipotenuzani toping.

- $p-r$ 100%
- $p+r$
- $2p-r$
- $r-p$

19 $y=\frac{x^2+6x+21}{11+6x+x^2}$ funksiyaning eng kichik butun qiymatini toping.

- 2 100%
- 6
- 4
- 1

20 $x^2+14x+y^2-10y+38=0$ tenglama bilan berilgan aylana chegaralab turgan soha yuzini toping.

- 49π
- 25π
- 36π 100%
- 64π

21 $f(x)=72cos7x\cdot cos11x$ uchun boshlang`ich funksiyani toping.

- $9sin4x+2sin18x+C$ 100%
- $9sin4x-2sin18x+C$
- $-9cos4x-2cos18x+C$
- $9cos4x-2cos18x+C$

22 $f(x)=48cos9x\cdot cos15x$ uchun boshlang`ich funksiyani toping.

- $4cos6x-cos24x+C$
- $4sin6x-sin24x+C$
- $4sin6x+sin24x+C$ 100%
- $-4cos6x-cos24x+C$

23 Soddalashtiring: $\sqrt{a-2a^{\frac{1}{2}}b^{\frac{1}{2}}+b}-\frac{a-b}{a^{\frac{1}{2}}-b^{\frac{1}{2}}}$; $(a>b\geq 0)$.

- $-2\sqrt{a}$
- $-2\sqrt{b}$ 100%
- $2\sqrt{a}$
- $2\sqrt{b}$

24 $3\cos 2x-3\sqrt{3}\sin 2x>0$ trigonometrik tengsizlikni yeching.

- $\left(-\frac{\pi}{12}+k\pi;\frac{\pi}{12}+k\pi\right)$; $k\in Z$
- $\left(-\frac{5\pi}{12}+k\pi;\frac{5\pi}{12}+k\pi\right)$; $k\in Z$

- $\left(-\frac{5\pi}{12}+k\pi;\frac{\pi}{12}+k\pi\right)$; $k\in Z$ 100%
- $\left(-\frac{\pi}{12}+k\pi;\frac{5\pi}{12}+k\pi\right)$; $k\in Z$

25 $2^{18}\cdot 4^{9}\cdot 5^{55}\cdot 8^{6}$ ko‘paytma necha xonali son bo‘ladi?

- 55 100%
- 57
- 54
- 56

26 5927031, 4587, 3069 sonlarining umumiy bo`luvchilari yig`indisini toping.

- 156
- 48 100%
- 148
- 56

27 $4(n-1)\in N$ son 1, 2, 3, 4, 5, 6, 8, 10 va 20~ga qoldiqsiz bo`linsa, n ning eng kichik natural qiymatini toping.

- 25
- 31 100%
- 27
- 28

28 Bir burchagi qavariq, qolgan burchaklari botiq bo`lgan beshburchakning ichki burchaklari yig`indisini toping.

- 540°
- 450°
- 960°

- 720 °

29 $y=\sqrt{sinx}$ bo`lsa, $y'\cdot\frac{6\sqrt{sinx}}{cosx}$ ko`paytmani hisoblang.

- 1 100%
- 3
- -2
- 2

30 $|x^2-x-3|+1+x=0$ tenglamani yeching.

- $\sqrt{2}$; $\sqrt{5}-1$
- - $\sqrt{2}$; $1-\sqrt{5}$ 100%
- -1; 3
- - $\sqrt{2}$; $\sqrt{5}-1$

31 $A(x)=a(x-2)\cdot(x+2)+2(x^2-bx+3)$ va $B(x)=bx^2-8x-4a+6$ ko`phadlar aynan teng bo`lsa, a va b larni toping.

- $a=-2$, $b=-4$
- $a=2$, $b=4$ 100%
- $a=2$, $b=-4$
- $a=-2$, $b=4$

32 $(-3;4)$ nuqtaning absissa, ordinata o`qlariga va koordinata boshiga simmetrik bo`lgan nuqtalarni tutashtirishdan hosil bo`lgan uchburchakning eng katta tomonini toping.

- 10 100%
- 12
- 14
- 24

33 Ikkita qo`shni yoqlarining markazlari orasidagi masofa $\sqrt{18}$ ga teng bo`lgan kubga tashqi chizilgan shar sirtining yuzini toping.

- 125π
- 108π 100%
- 144π
- 120π

34 To`g`ri chiziq doira aylanasini uzunliklarining nisbati 1:3 kabi bo`lgan 2 yoyga ajratadi. Bu chiziq doiraning yuzini qanday nisbatda bo`ladi?

- $\frac{\pi+1}{2\pi+1}$
- $\frac{\pi-2}{3\pi+2}$ 100%
- $1:9$
- $\frac{\pi+2}{3\pi+2}$

35 Agar $1+\frac{1}{2}+\frac{1}{3}+\ldots+\frac{1}{10}=S$ bo`lsa, S qaysi oraliqqa tegishli?

- $(\frac{23}{10};\frac{25}{6})$ 100%
- $(\frac{15}{11};\frac{23}{11})$
- $(6;7)$.
- $(\frac{35}{6};\frac{47}{6})$

36 Hisoblang <!--[if !msEquation]--> $\log_{10}(\sqrt{4-\sqrt{15}}+\sqrt{4+\sqrt{15}})$

- <!--[if !msEquation]--> $\frac{1}{2}$ 100%
- <!--[if !msEquation]--> $\log_{10}4$
- <!--[if !msEquation]--> $\log_{10}2$

1

37 Uchburchakli muntazam piramida asosining tomoni 10 sm uning balandligi 5 sm bo'lsa apofemasini (sm) toping

<!--[if !msEquation]--> $\frac{10\sqrt{3}}{3}$ 100%

<!--[if !msEquation]--> $10\sqrt{3}$

<!--[if !msEquation]--> $8\sqrt{3}$

<!--[if !msEquation]--> $\frac{8\sqrt{3}}{3}$

38 Sistemani yeching <!--[if !msEquation]--> $\begin{cases} x^3y + xy^2 = 6 \\ x^2 + y^2 - 1 = 2xy \end{cases}$

(3;4)

(4;3)

(2;3) 100%

(1;3)

39 Ifodani soddalashtiring<!--[if !msEquation]--> $\left(\frac{1}{2x-y} + \frac{3x}{4x^2-y^2} + \frac{1}{2x+y}\right) : \left(\frac{5}{2} + \frac{2{,}5y^2}{4x^2-y^2}\right)$

<!--[if !msEquation]--> $\frac{1}{x}$100%

<!--[if !msEquation]--> $2x$

<!--[if !msEquation]--> $\frac{2}{x}$

<!--[if !msEquation]--> x

40 Nechta butun son tengsizlikning yechimi bo'ladi. <!--[if !msEquation]-->
$log_{\sqrt{\pi}-\sqrt{e}}(6x - x^2 - 4) \geq 0$

3

4

5 100%

6

1 $\frac{1}{\sqrt{1}+\sqrt{4}}+\frac{1}{\sqrt{4}+\sqrt{7}}+\frac{1}{\sqrt{7}+\sqrt{10}}+\ldots+\frac{1}{\sqrt{2011}+\sqrt{2014}}$ ni hisoblang. 3

- $\frac{\sqrt{2014}-1}{3}$ 100%
- $\frac{1-\sqrt{2014}}{3}$
- 3
- $\frac{1}{3}$

---

2 $\frac{3\sqrt{2}-\sqrt{12}}{2-\sqrt{6}}\cdot x>1$ tengsizlikni yeching.

- $x<-\frac{\sqrt{3}}{3}$ 100%
- $x<1$
- $x>1$
- $x>-\frac{\sqrt{3}}{3}$

---

3 $2(\sin x+\cos x)+1+\sin 2x=0$ tenglamani yeching.

- $-\frac{\pi}{4}+\pi k, k\in Z$ 100%
- $\pm\frac{\pi}{4}+\frac{3\pi k}{4}, k\in Z$
- $\frac{\pi}{2}+\pi k, k\in Z$
- $\frac{\pi}{4}+\frac{2\pi k}{3}, k\in Z$

---

4 $\frac{1}{\frac{1}{\frac{1}{x}+\frac{1}{2}}+\frac{1}{\frac{1}{x}+\frac{1}{2}}}+\frac{1}{\frac{1}{\frac{1}{x}+\frac{1}{2}}+\frac{1}{\frac{1}{x}+\frac{1}{2}}}=\frac{x}{36}$ tenglamani yeching.

- 70 100%
- 1
- 60
- 36

5 x ning qanday eng kichik qiymatida $(\overline{3x5}+354)$ yig`indi 3 ga qoldiqsiz bo`linadi?

- 5
- 4
- 1 100%
- 6

6 $\frac{\sqrt{x^2+x-12}}{x-3}=0$ tenglamani yeching.

- -4 100%
- $[-4;\infty)$
- $\varnothing$
- $\{-4;3\}$

7 m ning qanday qiymatlarida $\vec{a}(m;3m;1,25)$ va $\vec{b}(m;-2;4)$ vektorlar o`zaro perpendikulyar bo`ladi?

- 3; 5
- 2; 5
- 1; 5 100%
- -5

8 $\begin{cases}\frac{1}{a}+\frac{4}{b}=\frac{1}{2},\\ \frac{2}{a}+\frac{3}{b}=\frac{4}{5}\end{cases}$ bo`lsa, $b-?$

- 17
- 50
- 25 100%
- 134

---

9 Hosilaga ega bo`lgan $f(x)$ funksiya uchun $f(x)+f(x+\pi)=-2x-\frac{2\pi}{3}$ va $f'(x)-f'(x+\pi)=-4\cos x$ tengliklar o`rinli bo`lsa, $f\left(\frac{\pi}{6}\right)$ ~ni toping.

- $-\frac{3}{2}$
- $-\frac{\sqrt{3}}{2}$
- -1 100%
- 0

---

10 Tenglamani yeching: $2tg^2x+3tgx-2=0$

- $arctg\frac{1}{2}+\pi n$, $n\in Z$
- $arctg\frac{1}{2}+\pi n$, $n\in Z$; $-arctg2+\pi n$, $n\in Z$ 100%
- $-arctg2+2\pi n$, $n\in Z$
- $arctg\frac{1}{2}+2\pi n$, $n\in Z$

---

11 Tenglamani yrching: $\sqrt{3}\cos\frac{x}{2}+\sin\frac{x}{2}=1$

- $\pi+2\pi k$; $-\frac{\pi}{3}+2\pi k$, $k\in Z$
- $\pi+4\pi k$; $\frac{\pi}{3}+4\pi k$, $k\in Z$

- $\pi + 4\pi k;\ -\frac{\pi}{3} + 4\pi k,\ k \in Z$ 100%
- $\pi + 4\pi k;\ k \in Z$

---

12 $x^2 - 4|x| - a + 3 = 0$ tenglama faqat bir juft qarama-qarshi ildizga ega bo`ladigan a larni toping.

- $-1 \le a < 3$
- $a > 3$
- $a > 3,\ a = -1$ 100%
- $a \ge -1$

---

13 Radiusi 1 ga teng aylanaga ichki chizilgan uchburchakning tomonlari a, b, c bo`lsa, shu tomonlari kvadratlari yig`indisining eng katta qiymatini toping.

- 12
- 9 100%
- 16
- $\frac{9}{4}$

---

14 Funksiyaning aniqlanish sohasini toping. $y = \frac{(x+2)\cdot\sqrt{20 - x - x^2}}{|x^2 - 1|}$

- $[-5;-1) \cup (-1;1)$
- $[-5;-1) \cup (-1;1) \cup (1;4]$ 100%
- $[-5;-1) \cup (1;4]$
- $(-1;1) \cup (1;4]$

---

15 $log_{x^2-1}(x^4 + 3x^2) = log_{x^2-1}(2x^3 + 6x)$ tenglamaning nechta yechimi bor?

- 2 ta
- 3 ta
- 1 ta 100%

- 4 ta

16 Oltin va durdan yasalgan bezakning og`irligi 3 misqol, narxi 24 dinor. Agar 1 misqol oltin 5 dinor, 1 misqol dur 15 dinor tursa, bezakda qancha misqol oltin bor?

- 2,4
- 1,8
- 2,1 100%
- 1,2

17 To‘g‘ri burchakli uchburchakning gipotenuzasi 25 ga, o‘tkir burchagining sinusi 0,6 ga teng bo‘lsa, gipotenuzaga tushirilgan balandlikni toping.

- 14
- 12 100%
- 10
- 15

18 Aylanani 7; 13; 18; 22 sonlariga proporsional yoylarga bo‘lganda, ularning burchaklarini toping.

- 42°; 78°; 108°; 132° 100%
- 49°; 75°; 95°; 141°
- 56°; 78°; 115°; 145°
- 49°; 89°; 91°; 131°

19 $y=9sin2x-sin18x$ funksiyaning hosilasini toping.

- $36sin8x\cdot cos10x$
- $36cos8x\cdot cos10x$
- $36sin8x\cdot sin10x$ 100%
- $-36cos8x\cdot sin10x$

20 $f(x)=24sin3x\cdot cos9x$ uchun boshlang`ich funksiyani toping.

○	$2cos6x-cos12x+C$ 100%
○	$2sin6x+sin12x+C$
○	$2sin6x-sin12x+C$
○	$-2cos6x-cos12x+C$

21	$f(x)=72cos9x\cdot cos27x$ uchun boshlang`ich funksiyani toping.
○	$2sin18x+sin36x+C$ 100%
○	$2sin18x-sin36x+C$
○	$-2cos18x-cos36x+C$
○	$2cos18x-cos36x+C$

22	$\cos 2x=\sin^2 x$ tenglamani yeching.
○	$\pm\frac{1}{2}\arccos\frac{1}{3}+k\pi$; $k\in Z$ 100%
○	$\arccos\frac{2}{3}+2k\pi$; $k\in Z$
○	$\arcsin\frac{1}{3}+2k\pi$; $k\in Z$
○	$\pm\arccos\frac{1}{3}+2k\pi$; $k\in Z$

23	$2^{10}\cdot 5^9\cdot 4^6\cdot 25^4$ ko‘paytma necha xonali son bo‘ladi?
○	19 100%
○	17
○	20
○	18

24	$log_3 81+log_3 9+log_3 3+\ldots$ ni hisoblang.
○	8 100%
○	27

- 0
- 95

25 Agar $d:c=-\sqrt{7}$ bo`lsa, d^2-7c^2 ni hisoblang.

- 0 100%
- -7
- 7
- $\sqrt{7}$

26 $\vec{a}(3;-3;0)$ va $\vec{b}(-6;3;3)$ vektorlar berilgan. $2\vec{a}$ va $\frac{1}{3}\vec{b}$ vektorlar orasidagi burchakni toping.

- 60°
- 120°
- 150° 100%
- 135°

27 $y=\sqrt{sinx}$ bo`lsa, $y'\cdot\frac{6\sqrt{sinx}}{cosx}$ ko`paytmani hisoblang.

- -2
- 1
- 3 100%
- 2

28 $\frac{(a-b)^2+ab}{(a+b)^2-ab}:\frac{a^5+b^5+a^2b^3+a^3b^2}{(a^3+b^3+ab^2+a^2b)}\cdot(a^3-b^3)$ ~ni soddalashtiring.

- $a+b$
- $a-b$ 100%
- $\frac{1}{a-b}$

- ab

29 3 soni bilan noma'lum son orasiga shunday son qo`yilganki, bu uchta son arifmetik progressiya tashkil etadi. Agar ikkinchi son 6 ga kamaytirilsa, musbat hadli geometrik progressiya hosil bo`ladi. Arifmetik progressiyaning ikkinchi hadini toping.

- 27
- 15 100%
- 12
- 14

30 Bo`luvchi 4/3 marta orttirilsa, bo`linuvchining esa 1/3 qismi yo`qotilsa, bo`linma qanday o`zgaradi?

- o`zgarmaydi
- 0,(8) marta oshadi
- 2 marta kamayadi 100%
- 25\% ga oshadi

31 $1-2x-x^2=2^{x+1}+2^{1-x}$ tenglamani yeching.

- $\varnothing$ 100%
- 1
- $\sqrt{2}-1$
- 3

32 Teng yonli trapetsiyaning o`tmas burchagi uchidan tushirilgan balandlik katta asosni 3 dm va 6 sm li kesmalarga ajratsa, trapetsiyaning kichik asosini toping.

- 2,7 dm
- 3 sm
- 2,4 dm 100%
- 2,4 sm

33 Radiuslari r =1 sm va R =3 sm bo`lgan aylanalar tashqi ravishda urinadi. Aylanalar urinish nuqtasidan ularning umumiy urinmalarigacha bo`lgan masofani (sm) toping.

- 3/2 100%
- 4/5
- 5/6
- 2/3

---

34 $(-3;4)$ nuqtaning absissa, ordinata o`qlariga va koordinata boshiga simmetrik bo`lgan nuqtalarni tutashtirishdan hosil bo`lgan uchburchakning eng katta tomonini toping.

- 24
- 12
- 10 100%
- 14

---

35 Konus o`q kesimining perimetri 72 ga, uning balandligi 24 ga teng. Uning hajmini toping.

- 720π
- 960π
- 800π 100%
- 400π

---

36 Tenglamani yeching<!--[if !msEquation]--> $\log_5(5^x+\cos x-\frac{\sqrt{3}}{2})=x$ agar <!--[if !msEquation]--> $x\in(0;2\pi)$

- <!--[if !msEquation]--> $(-\frac{\pi}{6};\frac{\pi}{6})$ 100%
- <!--[if !msEquation]--> $(-\frac{\pi}{3};\frac{\pi}{6})$
- <!--[if !msEquation]--> $(\frac{\pi}{6};\frac{5\pi}{6})$

<!--[if !msEquation]--> $(-\frac{\pi}{3};\frac{\pi}{3})$
37 Tengsizlikni yeching <!--[if !msEquation]--> $2-3x+x^2 \geq 2(x^2+4x+4)$
[2;3] 100%
[-2;3]
[-3;-2]
[-3;2]
38 4 va 324 sonlarining orasidan 3ta sonni toping ki ular birgalikda geometrik progressiya tashkil etsin
14,42,126
12,36,108 100%
10,30,90
11,33,99
39 3 va 432 sonlarining orasidan 3ta sonni toping ki ular birgalikda geometrik progressiya tashkil etsin
13,39,117
12,48,144 100%
44,176,304
15,45,135
40 Ifodani soddalashtiring<!--[if !msEquation]--> $\frac{x^3+y^3}{x^2+xy+y^2}\left(\frac{1}{x-\sqrt{xy}}+\frac{1}{x+\sqrt{xy}}\right)$
<!--[if !msEquation]--> -2
<!--[if !msEquation]--> 2 100%
<!--[if !msEquation]--> $2\sqrt{x}$
<!--[if !msEquation]--> $2\sqrt{y}$
1 $5^{\lg 3}+7^{\log_7 1}-3^{\lg 5}$ ifodaning qiymatini toping. 4

- 2
- 4
- 1 100%
- 3

2 Tenglamani yeching: $\sqrt{3}ctg\left(5x+\frac{\pi}{3}\right)=-3$

- $\frac{\pi}{10}+\frac{\pi k}{5};k\in Z$ 100%
- $-\frac{\pi}{6}+\pi k;k\in Z$
- $-\frac{\pi}{2}+\frac{\pi k}{5};k\in Z$
- $-\frac{\pi}{10}+\frac{2\pi k}{5};k\in Z$

3 Uchlari $A(-3;2)$, $B(3;4)$, va $C(5;-2)$ nuqtalarda bo`lgan uchburchakning AB va BC tomonlari o`rtalarini tutashtirishdan hosil bo`lgan chiziqning uzunligini toping.

- 5 $\sqrt{2}$
- 2 $\sqrt{5}$ 100%
- 5
- 3 $\sqrt{5}$

4 $2\sqrt{1-x^2}=x-2$ tenglamani yeching.

- $\frac{4}{5}$
- $\varnothing$ 100%
- 0; $\frac{4}{5}$
- 0

5 $\left(\frac{3}{7}\right)^{\frac{x^2-2x}{x^2}} \geq 1$ tengsizlikni yeching.

- $(0;2)$
- $[0;2)$
- $(0;2]$ 100%
- $[0;~2]$

6 $\begin{cases} 2x+2y=22 \\ x^2-y^2=11 \end{cases}$ sistemadan x ni toping.

- 6 100%
- 5
- -5
- -6

7 $2-\sqrt{5(x+4)}+\sqrt{8+x}=0$ tenglamaning haqiqiy ildizlari yig`indisini toping.

- 3
- 1 100%
- -4
- -3

8 102 gacha bo`lgan 4 ga karrali natural sonlar yig`indisini toping.

- 1000
- 1300 100%
- 1100
- 2000

9 $x^2-4|x|-a+3=0$ tenglama ikki juft qarama-qarshi ildizga ega bo`ladigan a larni toping.

- $-1 < a < 3$ 100%
- $a > 3$
- $a \geq -1$
- $a > 3$, $a = -1$

10 Tenglamani yeching: $6 \cdot 5^{\log_3 x} + 2 \cdot 5^{\log_3 x - 1} = 3 \cdot 4^{\log_3 x + 1} + 2^{\log_{\sqrt{3}} x - 1}$.

- 27 100%
- 81
- 9
- 3

11 $3^{2x} \cdot x^2 + 5x - 6 \leq x^2 + 5x \cdot 3^{2x} - 2 \cdot 3^{2x+1}$ tengsizlikning eng katta manfiy butun yechimining eng kichik musbat butun yechimiga nisbatini toping.

- -1
- $\frac{1}{2}$
- $-\frac{1}{2}$ 100%
- -2

12 Diagonallarining soni tomonlarining soniga teng bo`lgan qavariq muntazam ko`pburchakning ichki burchaklaridan biri va har bir uchidan bittadan olingan tashqi burchaklari yig`indisi topilsin.

- 612°
- 468° 100%
- 720°
- 540°

13 Diagonallarining soni tomonlarining sonidan 2 marta kam bo`lgan qavariq muntazam ko`pburchak markazidan uning qo`shni uchlariga o`tkazilgan kesmalar hosil qilgan burchakni toping.

- 60°

- 108°
- 90° 100%
- 72°

14 Diagonallarining soni tomonlari sonidan 3 marta ko`p bo`lgan qavariq muntazam ko`pburchak markazidan ko`pburchak qo`shni uchlariga o`tkazilgan kesmalar hosil qilgan burchakni toping.

- 36 °
- 40 ° 100%
- 30 °
- 45 °

15 $\frac{\sqrt{x+1}}{log_4|x-2|} \geq 0$ tengsizlikni qanoatlantiruvchi eng kichik natural sonni toping.

- 1
- 3
- 4 100%
- 5

16 Asoslari 8 sm va 10 sm, balandligi 4 sm bo`lgan trapetsiyaga tengdosh uchburchakning asosi 4,5 sm. Shu uchburchakning balandligini toping.

- 14 sm
- 16 sm 100%
- 12 sm
- 18 sm

17 Tenglamani yeching. $log_2(9-2^x)=3-x$

- 0
- $\varnothing$

- 0;3 100%
- 3

18 Bir ayol bog`ga olma tergani kirdi. Bog`dan u 4 ta eshik orqali chiqishi kerak edi. Har bir eshik oldida qorovul turgan bo`lib, ayol birinchi qorovulga tergan olmalarining yarmini berdi. Ikkinchi qorovulga esa qolgan olmalarning yarmini berdi. Uchinchi va to`rtinchi qorovullarni ham huddi shunday siyladi. Oxirida o`zida 10 ta olma qoldi. Ayol bog`dan necha dona olma uzgan?

- 160 100%
- 210
- 180
- 150

19 Natural sonlardan birini ikkinchisiga bo`lganda, shunday o`nli kasr hosil bo`ldiki, uning butun qismi bo`luvchiga, kasr qismi esa bo`linuvchiga teng bo`ldi. Bo`luvchini toping.

- 5
- 2 100%
- 3
- 10

20 $log_{x^2-1}(x^4+3x^2)=log_{x^2-1}(2x^3+6x)$ tenglamani yeching.

- 2 100%
- $\pm\sqrt{3}$; 2
- -2
- 0; $\pm\sqrt{3}$; 2

21 $log_x(1/3)=-2/3$ tenglamadan x ni toping.

- $3\sqrt{3}$ 100%
- $6\sqrt{3}$

- $4\sqrt{3}$
- $2\sqrt{3}$

22 $27^{(log_{0,3}3)^{-1}} \cdot 9^{log_3 2\sqrt{2}}$ ni hisoblang.

- 1 100%
- 2
- 0,5
- 3

23 $f(x) = 24sin3x \cdot cos9x$ uchun boshlang`ich funksiyani toping.

- $-2cos6x - cos12x + C$
- $2cos6x - cos12x + C$ 100%
- $2sin6x - sin12x + C$
- $2sin6x + sin12x + C$

24 $f(x) = 72cos7x \cdot cos11x$ uchun boshlang`ich funksiyani toping.

- $9cos4x - 2cos18x + C$
- $9sin4x + 2sin18x + C$ 100%
- $-9cos4x - 2cos18x + C$
- $9sin4x - 2sin18x + C$

25 $\sqrt{x-3} - \sqrt{x+1} + 2 = 0$ tenglamaning ildizlari ko‘paytmasini toping.

- 2
- 3 100%
- 4
- 1

26 $4^{10} \cdot 15^3 \cdot 25^8$ ko‘paytma necha xonali son bo‘ladi?

- 22

- 20
- 21 100%
- 23

---

27 $C(2;1)$; $B(-2;5)$; $A(3;-1)$ nuqtalar berilgan. $\vec{AB}+\vec{AC}$ vektor bilan yo`nalishdosh va uzunligi uning $\frac{2}{5}$ qismiga teng bo`lgan vektorni toping.

- $\left(\frac{12}{5};\frac{16}{5}\right)$
- $\left(-\frac{12}{5};\frac{16}{5}\right)$ 100%
- $(1,5;-2)$
- $(-1,5;2)$

---

28 $0,3\cdot10^{-4}+0,2\cdot10^{-5}+0,001\cdot10^{-2}$ ni hisoblang.

- $42\cdot10^{-5}$
- $4,2\cdot10^{-5}$
- $42\cdot10^{-6}$ 100%
- $0,42\cdot10^{-5}$

---

29 Aylananing ikkita vatari O nuqtada kesishadi va kesishish nuqtasida birinchi vatar 12 va 18 ga, ikkinchi vatar esa 3:4 nisbatda bo`linadi. Ikkinchi vatarning uzunligini toping.

- $14\sqrt{2}$
- $21\sqrt{2}$ 100%
- $16\sqrt{2}$
- $12\sqrt{2}$

---

30 $log_3 81+log_3 9+log_3 3+\dots$ ni hisoblang.

- 0

- 95
- 8 100%
- 27

31 $x-a(x^2+1)+x^3+10=0$ tenglama ildizlaridan biri -1 ga teng. a ni toping.

- -4
- 4 100%
- 2
- 0

32 $\frac{2}{3}\left(x-\frac{1}{2}\right)+\frac{2}{7}\left(4\frac{2}{3}x+3\frac{1}{2}\right)=3$ tenglamani yeching.

- $1\frac{1}{6}$ 100%
- $\frac{2}{3}$
- 3
- $\frac{2}{7}$

33 Teng yonli trapetsiyaning o`tmas burchagi uchidan tushirilgan balandlik katta asosni 3 dm va 6 sm li kesmalarga ajratsa, trapetsiyaning kichik asosini toping.

- 2,4 dm 100%
- 2,4 sm
- 2,7 dm
- 3 sm

34 Uchlari $A(7;7)$ va $B(-2;-2)$ nuqtalarda bo`lgan kesmani 1:2 nisbatta bo`luvchi C nuqtaning koordinatalarini toping.

- $(4;4)$ 100%

- $(-4;-4)$
- $(2,5;2,5)$
- $(4;-4)$

35 To`g`ri burchakli trapetsiyaga ichki chizilgan aylananing radiusi 2 sm, uning katta asosi 12 sm bo`lsa, trapetsiyaning yuzini (sm^2) toping.

- 28,8 100%
- 32,04
- 20,24
- 24

36 Tenglamani yeching $\log_2(16^x + ctgx - \sqrt{3}) = 4x$ agar $x \in (\pi; 2\pi)$

- $\frac{\pi}{3}$
- $\frac{7\pi}{6}$ 100%
- $\frac{4\pi}{3}$
- $\frac{\pi}{6}$

37 Uchlari to'g'ri burchakli koordinata tekisligining A(-2;-3), B(1;4) va C(3;-3) nuqtalarida bo'lgan uchburchakning yuzini toping

- 18
- 17
- 17,5 100%
- 18,5

38 To'g'ri burchakli uchburchakning bitta burchagi 37° ga teng. To'g'ri burchak uchidan chiquvchi balandlik va bissektrissa orasidagi burchakni toping .

- 8° 100%
- 11°

9<!--[if !msEquation]--> °

12<!--[if !msEquation]--> °

---

39 Tenglamani yeching <!--[if !msEquation]--> $e^{ln^2x}+9x^{lnx}=27$

<!--[if !msEquation]--> $e^2;\frac{1}{e^2}$

e

<!--[if !msEquation]--> $e;\frac{1}{e}$ 100%

<!--[if !msEquation]--> e^2

---

40 <!--[if !msEquation]--> $(x+1)^2+(y-3)^2=8$ formula bilan berilgan aylana va y-2x-3=0 formula bilan berilgan to'g'ri chiziqlarning kesishish nuqtalari absissalari yig'indisini toping .

-0,6

0,4

-0,4 100%

0,6

1 $2\sqrt{1-x^2}=x-2$ tenglamani yeching. 5

$\varnothing$ 100%

0; $\frac{4}{5}$

$\frac{4}{5}$

0

---

2 $\frac{x^2-x}{x^2-x-1}-1=\frac{x^2-x+2}{x^2-x-2}$ tenglama ildizlarining o`rta arifmetigini toping.

1

0,5 100%

2

- 1,5

---

3 Ifodani soddalashtiring: $(3^{2^0}+1)(3^{2^1}+1)(3^{2^2}+1)\ldots(3^{2^n}+1)$

- $3^{2^{n+1}}-1$
- $\frac{1}{2}(3^{2^{n+1}}-1)$ 100%
- $\frac{1}{2}(9^{n+1}-1)$
- $9^{n+1}-1$

---

4 Tenglamani yeching: $2tg^2x+3tgx-2=0$

- $-arctg2+2\pi n,\ n\in Z$
- $arctg\frac{1}{2}+\pi n,\ n\in Z$; $-arctg2+\pi n,\ n\in Z$ 100%
- $arctg\frac{1}{2}+2\pi n,\ n\in Z$
- $arctg\frac{1}{2}+\pi n,\ n\in Z$

---

5 $|x^2-5ax|=15a$ tenglama a ning qanday qiymatlarida faqat 2 ta manfiy ildizga ega?

- $(0;2,4)$
- 2,4
- $\varnothing$ 100%
- 3

---

6 $x^2-4|x|-a+3=0$ tenglama ikkita musbat ildizga ega bo`ladigan $a$ ning butun qiymatlari o`rta arifmetigini toping.

- 1100%
- 1,5
- 3

- 0,5

7 ABC uchburchakning AC tomonida D nuqta olindi. Agar $\angle ABC = \angle BDC$ bo`lib, $3AB = 4BD$ va $BC = 6$ sm bo`lsa, AC kesma uzunligini(sm) toping.

- 4,5
- 12
- 8 100%
- 10

8 Tengsizlikni yeching: $3^{2x} \cdot x^2 + 5x - 6 \le x^2 + 5x \cdot 3^{2x} - 2 \cdot 3^{2x+1}$.

- $(-\infty; 0] \cup [2; 3]$ 100%
- $[0; 2] \cup \{3\}$
- $(-\infty; 0] \cup \{2\} \cup [3; +\infty)$
- $[0; 2] \cup [3; +\infty)$

9 Tenglamani yeching. $log_2(9 - 2^x) = 3 - x$

- 3
- 0;3 100%
- $\varnothing$
- 0

10 $\frac{3^x}{3^x - 1} \le \frac{1}{3^x + 1} + \frac{2 \cdot 3^x}{3^{2x} - 1}$ tengsizlikni qanoatlantiruvchi eng katta butun sonni toping.

- -4
- -1 100%
- -3
- -2

11 $log_{x^2-1}(x^4 + 3x^2) = log_{x^2-1}(2x^3 + 6x)$ tenglamani yeching.

- $\pm\sqrt{3}$; 2
- 2 100%
- 0; $\pm\sqrt{3}$; 2
- -2

12 Ifoda qiymatining oxirgi raqamini toping. $5\cdot\left|2015^{2013}-2014^{2014}\right|+7$

- 4
- 2 100%
- 6
- 8

13 Qavariq oltiburchakning ichki burchaklari yig‘indisini toping.

- 720 ° 100%
- 690 °
- 735 °
- 750 °

14 $27^{(\log_{0,3}3)^{-1}}\cdot 9^{\log_3 2\sqrt{2}}$ ni hisoblang.

- 3
- 2
- 1 100%
- 0,5

15 Avtomobil haydovchisi birinchi soatda yo`lning yarmini, ikkinchi soatda qolgan yo`lning $\frac{1}{3}$ qismini, uchinchi soatda qolgan 56 km masofani bosib o`tdi. Haydovchi uch soatda jami qancha (km) yo`l bosib o`tgan?

- 168 100%
- 112

- 156
- 144

16 $f(x)=24sin3x\cdot cos9x$ uchun boshlang`ich funksiyani toping.

- $2sin6x-sin12x+C$
- $2cos6x-cos12x+C$ 100%
- $2sin6x+sin12x+C$
- $-2cos6x-cos12x+C$

17 $4^{10}\cdot 15^3\cdot 25^8$ ko‘paytma necha xonali son bo‘ladi?

- 22
- 21 100%
- 23
- 20

18 $y=1+8cos^4x-8cos^3x$ funksiyaning eng kichik musbat davrini toping.

- $\frac{\pi}{2}$
- 2π 100%
- π
- $\frac{3\pi}{2}$

19 $(9^2-1^2)(8^2-2^2)(7^2-3^2)\dots(1^2-9^2)$ ko`paytmani hisoblang.

- 10000
- 86420000
- 0 100%
- 480000

20 $-7:(-15)\cdot 795-(-99-(-13)\cdot(-5)):(-17)+416\frac{15}{17}-25$ ifodaning qiymatini toping.

- $753\frac{4}{17}$ 100%
- $-753\frac{4}{17}$
- $-752\frac{7}{17}$
- $12\frac{7}{17}$

21 $144\cdot 49$ ko`paytmaning natural bo`luvchilari yig`indisini toping.

- 28302
- 22981
- 22971 100%
- 19871

22 5927031, 4587, 3069 sonlarining umumiy bo`luvchilari yig`indisini toping.

- 48 100%
- 56
- 148
- 156

23 Agar ABC uchburchakda BE mediana va AD bissektrisalar o`zaro perpendikulyar bo`lsa, AB:AC nisbatni toping.

- 3:1
- 2:1
- 1:2 100%
- 1:3

24 $f(x)=(2x-4)^7$ funksiyaning hosilasini toping.

- $14(4+2x)^6$
- $14(4-2x)^6$ 100%
- $-14(4+2x)^6$
- $-14(4-2x)^6$

25 Ishchi har kuni kunlik rejada ko`rsatilganidan 25 ta detal ortiq yasab, uch kunda rejadagi 7 kunga mo`ljallanganidan 15 ta ortiq detal yasadi. Ishchi har kuni nechtadan detal yasagan?

- 15
- 40 100%
- 47
- 44

26 Teng yonli trapetsiyaning diagonallari o`zaro perpendikulyar hamda yuzi 32 ga teng bo`lsa, uning diagonali uzunligini toping.

- 6
- 8 100%
- 4
- $4\sqrt{2}$

27 Yig`indisi 6 ga teng, birinchi 5 ta hadining yig`indisi esa $5\frac{13}{16}$ ga teng bo`lgan cheksiz kamayuvchi geometrik progressiyaning uchinchi hadini toping.

- 0,75 100%
- 3
- 1,5
- 0,5

28 $\vec{a}(1;2;3)$ vektorni $\vec{p}(0;1;1)$, $\vec{n}(1;0;1)$, $\vec{m}(1;1;0)$ vektorlar orqali ifodalang.

- $\vec{a}=\vec{m}+\vec{p}-2\vec{n}$

- $\vec{a}=\vec{m}+\vec{n}+\vec{p}$
- $\vec{a}=\vec{n}+2\vec{p}$ 100%
- $\vec{a}=2\vec{m}-3\vec{p}$

29 Teng yonli trapetsiyaning o`tmas burchagi uchidan tushirilgan balandlik katta asosni 3 dm va 6 sm li kesmalarga ajratsa, trapetsiyaning kichik asosini toping.

- 3 sm
- 2,4 sm
- 2,4 dm 100%
- 2,7 dm

30 $\left|x^2-x-3\right|+1+x=0$ tenglamani yeching.

- $\sqrt{2}$; $\sqrt{5}-1$
- - $\sqrt{2}$; $\sqrt{5}-1$
- - $\sqrt{2}$; $1-\sqrt{5}$ 100%
- -1; 3

31 Agar $\frac{1}{1}+\frac{1}{2}+\frac{1}{3}+\frac{1}{4}+\frac{1}{5}+\frac{1}{6}=\frac{m}{n}$ tenglamadagi m va n sonlari o`zaro tub natural sonlar bo`lsa, $m+n$ ni toping.

- 94
- 69 100%
- 49
- 56

32 Uchburchakning tomonlari 6; 5 va 4 m. 5 m li tomonning 6 m li tomondagi proyeksiyasi necha metr?

- $3\frac{3}{4}$ 100%

- $4\frac{3}{4}$
- $3\frac{1}{4}$
- $4\frac{1}{4}$

33 Ikkita qo`shni yoqlarining markazlari orasidagi masofa $\sqrt{18}$ ga teng bo`lgan kubga tashqi chizilgan shar sirtining yuzini toping.

- 144π
- 108π 100%
- 120π
- 125π

34 $\int_0^{2\pi} sin^4 7x dx$ ni hisoblang.

- $\frac{3\pi}{4}$ 100%
- $\frac{7\pi}{8}$
- $\frac{6\pi}{7}$
- $\frac{7\pi}{4}$

35 Uchburchakning tomonlari 15, 14, 13 bo`lsa, uchburchakka ichki chizilgan aylana radiusini toping

- 3
- 2
- 4 100%
- 7

36 Hisoblang <!--[if !msEquation]--> $\log_{12}(\sqrt{5-\sqrt{24}}+\sqrt{5+\sqrt{24}})$

1

<!--[if !msEquation]--> $\frac{1}{2}$100%

<!--[if !msEquation]--> $\log_{12} 2$

<!--[if !msEquation]--> $\log_{12} 5$

---

37 Tengsizlikni yeching <!--[if !msEquation]--> $5 + 4x - x^2 \geq 2(x^2 + 3{,}5x - 0{,}5)$

[-2;2]

[1;2]

[-2;1] 100%

[-1;1]

---

38 Uchburchakli muntazam piramida asosining tomoni 10 sm uning balandligi 5 sm bo'lsa apofemasini (sm) toping

<!--[if !msEquation]--> $10\sqrt{3}$

<!--[if !msEquation]--> $\frac{10\sqrt{3}}{3}$ 100%

<!--[if !msEquation]--> $\frac{8\sqrt{3}}{3}$

<!--[if !msEquation]--> $8\sqrt{3}$

---

39 To'g'ri burchakli uchburchakning bitta burchagi 61<!--[if !msEquation]--> $^\circ$ ga teng. To'g'ri burchak uchidan chiquvchi balandlik va bissektrissa orasidagi burchakni toping .

29<!--[if !msEquation]--> $^\circ$

16<!--[if !msEquation]--> $^\circ$ 100%

33<!--[if !msEquation]--> $^\circ$

13<!--[if !msEquation]--> $^\circ$

---

40 To'g'ri burchakli uchburchakning bitta burchagi 70<!--[if !msEquation]--> $^\circ$ ga teng. To'g'ri burchak uchidan chiquvchi balandlik va bissektrissa orasidagi burchakni toping .

20<!--[if !msEquation]--> $^\circ$

27<!--[if !msEquation]--> $^\circ$

25<!--[if !msEquation]--> ° 100%

23<!--[if !msEquation]--> °

1 Agar $g(x)=2x-1$ funksiyadan $g(f(x))=2x+1$ funksiya tuzilgan bo`lsa, $f(x)$ funksiyani toping. 6

$2x+1$

$x+1$ 100%

$2x-1$

$x-1$

---

2 $\begin{cases} y=\dfrac{4x^2-x^4}{x^2-4} \\ x=y+6 \end{cases}$ ni qanoatlantiruvchi yechimlar nechta?

3

1 100%

0

2

---

3 $2(sinx+cosx)+1+sin2x=0$ tenglamani yeching.

$\dfrac{\pi}{4}+\dfrac{2\pi k}{3}, k\in Z$

$-\dfrac{\pi}{4}+\pi k, k\in Z$ 100%

$\dfrac{\pi}{2}+\pi k, k\in Z$

$\pm\dfrac{\pi}{4}+\dfrac{3\pi k}{4}, k\in Z$

---

4 $\dfrac{1}{\dfrac{1}{\dfrac{1}{x}+\dfrac{1}{2}}+\dfrac{1}{\dfrac{1}{x}+\dfrac{1}{2}}}+\dfrac{1}{\dfrac{1}{\dfrac{1}{x}+\dfrac{1}{2}}+\dfrac{1}{\dfrac{1}{x}+\dfrac{1}{2}}}=\dfrac{x}{36}$ tenglamani yeching.

- 36
- 70 100%
- 60
- 1

5 2013^{2015} ni 10 ga bo`lgandagi qoldiqni toping.

- 3
- 1
- 7 100%
- 9

6 $y = x^{2014} + 2014^x$ funksiya hosilasining $x = 0$ nuqtadagi qiymatini toping.

- $ln2014 - 2014$
- ln2014 100%
- 1
- $ln2014 - 1$

7 $\begin{cases} 2x+2y=22 \\ x^2-y^2=11 \end{cases}$ sistemadan x ni toping.

- -6
- 6 100%
- -5
- 5

8 102 gacha bo`lgan 4 ga karrali natural sonlar yig`indisini toping.

- 1100
- 1000
- 1300 100%

- 2000

9 ABCD trapetsiyaning AC diagonali CD yon tomoniga perpendikulyar. Agar $\angle D = 69^\circ$ va $AB = BC$ bo`lsa, B burchakni toping.

- 142 °
- 135 °
- 138 ° 100%
- 132 °

10 Agar $\frac{1}{2a} + \frac{a}{1,5} = \frac{4}{3}$ bo`lsa $\frac{0,5^3}{a^2} + \frac{a^2}{4,5}$ ni toping

- $\frac{4}{9}$
- $\frac{5}{9}$ 100%
- $\frac{7}{9}$
- $\frac{8}{9}$

11 $\frac{b^{\frac{5}{3}} + 2b^{\frac{2}{3}} + b^{-\frac{1}{3}}}{b^{\frac{7}{6}} + b^{\frac{1}{6}}}$ ni soddalashtiring.

- 1
- $b + b^{-1}$
- $b^{\frac{1}{2}} + b^{-\frac{1}{2}}$ 100%
- $\frac{b + b^{-2}}{2}$

12 Diagonallarining soni tomonlari sonidan 3,5 barobar ko`p bo`lgan ko`p burchakning barcha ichki burchaklari yig`indisi topilsin.

- 1080 °

- 1350 °
- 1440 ° 100%
- 1260 °

13 Diagonallarining soni tomonlari sonidan 3,5 barobar ko`p bo`lgan qavariq muntazam ko`pburchakning tashqi burchaklaridan biri topilsin.

- 40°
- 36° 100%
- 60°
- 45°

14 Tenglamani yeching. $log_2(9-2^x)=3-x$

- 3
- 0
- 0;3 100%
- $\varnothing$

15 $\frac{3^x}{3^x-1} \le \frac{1}{3^x+1}+\frac{2\cdot 3^x}{3^{2x}-1}$ tengsizlikni qanoatlantiruvchi eng katta butun sonni toping.

- -4
- -2
- -1 100%
- -3

16 Ikki xonali sonning o`nliklari soni birliklari sonining 2/3 qismiga teng. Bu sonni uning teskari tartibda yozilganidan ayirsak, ayirma 18 bo`ldi. Shu sonni toping.

- 46 100%
- 32
- 24

- 48

17 Tengsizlikni yeching: $\left|\frac{x^2-3x+2}{x-1}\right| \le 1$

- $(1;3]$ 100%
- $(1;3)$
- $(1;5]$
- [1;5]

18 Teng yonli trapetsiyaning diagonali o‘rta chizig‘ini 1,5 va 7,5 ga teng kesmalarga ajratadi. Agar trapetsiyaning yon tomoni 10 ga teng bo‘lsa, balandligini toping.

- 6
- 7
- 8 100%
- 10

19 Radiusi 8 ga teng bo‘lgan aylanaga ichki chizilgan muntazam oltiburchakning perimetrini toping.

- 48 100%
- $48\sqrt{3}$
- 56
- $48\sqrt{2}$

20 Ifodani soddalashtiring. $\left(\frac{x-0,(5)}{\sqrt[3]{x^2}+\sqrt[3]{\frac{5x}{9}}+\sqrt[3]{\frac{25}{81}}}+(0,(5))^{\frac{1}{3}}\right)^3$

- x 100%
- $x+1$
- $2x$

- $x-1$

21 $0,2^{x^2+7x+4,5}=5\sqrt{5}$ tenglamani yeching.

- -1; -6 100%
- -1; 6
- 1; 6
- 1; -6

22 $A(-3,5;3,5)$ nuqtadan o`tuvchi va $\bar{a}(3;4,5)$ vektorga perpendikulyar bo`lgan to`g`ri chiziq tenglamasini toping.

- $2x-3y-3,5=0$
- $2x+3y+3,5=0$
- $2x+3y-3,5=0$ 100%
- $2x-3y+3,5=0$

23 $y=9sin2x-sin18x$ funksiyaning hosilasini toping.

- $36sin8x\cdot cos10x$
- $36sin8x\cdot sin10x$ 100%
- $-36cos8x\cdot sin10x$
- $36cos8x\cdot cos10x$

24 $f(x)=12cos2x\cdot sin4x$ uchun boshlang`ich funksiyani toping.

- $3cos2x-cos6x+C$
- $3sin2x+sin6x+C$
- $-3cos2x-cos6x+C$ 100%
- $3sin2x-sin6x+C$

25 $f(x)=48cos9x\cdot cos15x$ uchun boshlang`ich funksiyani toping.

- $-4cos6x-cos24x+C$

- $4sin6x + sin24x + C$ 100%
- $4sin6x - sin24x + C$
- $4cos6x - cos24x + C$

---

26 $\sin 6x \cdot \cos 2x \geq \sin 5x \cdot \cos 3x$ trigonometrik tengsizlikni yeching.

- $\left[2k\pi; \frac{\pi}{6} + 2k\pi\right] \cup \left[\frac{\pi}{2} + 2k\pi; \frac{5\pi}{6} + 2k\pi\right]; \ k \in Z$
- $\left[k\pi; \frac{\pi}{6} + k\pi\right] \cup \left[\frac{\pi}{2} + k\pi; \frac{5\pi}{6} + k\pi\right]; \ k \in Z$ 100%
- $\left[-\frac{\pi}{6} + \frac{2\pi}{3}; \frac{\pi}{6} + \frac{2\pi}{3}\right]; \ k \in Z$
- $\left[\frac{\pi}{6} + \frac{2\pi}{3}; \frac{\pi}{6} + \frac{2\pi}{3}\right]; \ k \in Z$

---

27 $C(2;1)$; $B(-2;5)$; $A(3;-1)$ nuqtalar berilgan. $\vec{AB} + \vec{AC}$ vektor bilan yo`nalishdosh va uzunligi uning $\frac{2}{5}$ qismiga teng bo`lgan vektorni toping.

- $\left(-\frac{12}{5}; \frac{16}{5}\right)$ 100%
- $(-1,5;2)$
- $(1,5;-2)$
- $\left(\frac{12}{5}; \frac{16}{5}\right)$

---

28 $f(x) = 5x^2 + 3x - 12$ funksiya hosilasini toping.

- $\frac{5}{3}x^3 + \frac{3x^2}{2} - 11x$
- $10x + 3$ 100%
- $10x^3 + 3x - 12$
- $10x - 3$

---

29 $\sqrt{x+x\sqrt{x}}-\sqrt{x(1+x)}=\sqrt{1+x}-\sqrt{1+\sqrt{x}}$ tenglamaning haqiqiy ildizlari yig`indisini toping.

- 3
- 1 100%
- 2
- 0

---

30 $3,1,\frac{1}{3},\ldots$ geometrik progressiyaning oltinchi va ettinchi hadlarini toping.

- $\frac{1}{81};\frac{1}{243}$ 100%
- $\frac{1}{27};\frac{1}{81}$
- 1,~3
- $\frac{1}{9};\frac{1}{27}$

---

31 $4^{4^x}=2^{2^{2^{x+2}}}$ tenglamani yeching.

- 4
- 3
- 40 100%
- 8

---

32 Taqqoslang: $a=30^{13}$ va $b=17^{13}+13^{13}$

- $a<b$
- $a>b$ 100%
- $a+30<b$
- $a=b$

---

33 $8\int_0^{\frac{\pi}{12}} sinx\cdot cosx\cdot cos2xdx$ ni hisoblang

- $\frac{1}{4}$ 100%
- $\frac{1}{2}$
- 1
- $-\frac{1}{2}$

---

34 To`g`ri chiziq doira aylanasini uzunliklarining nisbati 1:3 kabi bo`lgan 2 yoyga ajratadi. Bu chiziq doiraning yuzini qanday nisbatda bo`ladi?

- $1:9$
- $\frac{\pi+1}{2\pi+1}$
- $\frac{\pi-2}{3\pi+2}$ 100%
- $\frac{\pi+2}{3\pi+2}$

---

35 $\left(\frac{2log_6 2+log_6 27}{log_6\sqrt[3]{0,25}+log_6\frac{1}{3}}\right)^2$ ni hisoblang.

- 27
- 9 100%
- $9log_6 27$
- 18

---

36 Motosiklchi 50km masofani 45 minutda bosib o'tadi. Velosipedchi 40km masofani 4 minutda bosib o'tsa, velosipedchining tezligi motosikl tezligining nechi foiziga teng

- <!--[if !msEquation]--> 31,3%
- <!--[if !msEquation]--> 22,5%100%

<!--[if !msEquation]--> $33,2\%$

<!--[if !msEquation]--> $20,8\%$

37 Geometrik progressiyaning maxraji 4ga teng. Agar 6chi va 2chi hadlarni ayirmasi 255ga teng bo'lsa, dastlabki 6ta had yig'indisini toping

334

341 100%

332

344

38 Geometrik progressiyaning maxraji 2ga teng. Agar 7chi va 1chi hadlarni ayirmasi 255ga teng bo'lsa, dastlabki 8ta had yig'indisini toping

127,5 100%

128

134

132,5

39 Yon tomoni 5ga teng bo'lgan teng yonli uchburchakning asosiga tushurilgan mediana 4 ga teng bo'lsa, uning asosini toping

<!--[if !msEquation]--> $7\sqrt{7}$

<!--[if !msEquation]--> $5\sqrt{3}$

6 100%

<!--[if !msEquation]--> $5\sqrt{7}$

40 Asosining tomonlari 6sm va 8sm bo'lgan to'g'ri parallelepipedning diagonali asos tekisligi bilan<!--[if !msEquation]--> 45° li burchak tashkil etadi. Uning hajmini toping .

480 100%

280

720

240

1 $3^{\log_2 5}+7^{\log_8 1}-5^{\log_2 3}$ ifodaning qiymatini toping. 7

- 2
- 4
- 1 100%
- 3

2 $5^{\lg 3}+7^{\log_8 1}-3^{\lg 5}$ ifodaning qiymatini toping.

- 1 100%
- 4
- 3
- 2

3 Tenglamani yeching: $\sqrt{3}ctg\left(5x+\frac{\pi}{3}\right)=-3$

- $-\frac{\pi}{6}+\pi k; k\in Z$
- $\frac{\pi}{10}+\frac{\pi k}{5}; k\in Z$ 100%
- $-\frac{\pi}{10}+\frac{2\pi k}{5}; k\in Z$
- $-\frac{\pi}{2}+\frac{\pi k}{5}; k\in Z$

4 $\cos^2\left(\frac{2\pi}{3}+2\alpha\right)+\cos^2\left(\frac{2\pi}{3}-2\alpha\right)+\cos^2 2\alpha$ ni soddalashtiring.

- 0,5
- 1,5 100%
- $\cos^2 2\alpha$
- 0,75

5 $sin80^\circ sin40^\circ sin20^\circ$ ni hisoblang.

- $\frac{\sqrt{3}}{16}$
- $\frac{\sqrt{3}}{4}$
- $\frac{\sqrt{3}}{8}$ 100%
- $\frac{\sqrt{3}}{2}$

6 Nechta $(m;n)$ natural sonlar $(m>n)$ juftligi $\begin{cases} EKUB(m;n)=5 \\ m+n=20 \end{cases}$ sistemani qanoatlantiradi?

- 2
- 4
- 1 100%
- 3

7 $(x^2+11x+11)(x^2+x+11)=11x^2$ tenglama eng kichik ildizi eng kattasidan qancha kichik?

- 10 100%
- 8
- 9
- 11

8 Radiusi 1 ga teng aylanaga ichki chizilgan uchburchakning tomonlari a, b, c bo`lsa, shu tomonlari kvadratlari yig`indisining eng katta qiymatini toping.

- $\frac{9}{4}$
- 9 100%
- 12

- 16

9 Parallelogramm diagonallarining uzunliklari 6 va 8 ga teng bo`lib, ular o`zaro perpendikulyar bo`lsa, unga ichki chizilgan doira yuzi aniqlansin.

- $4,84\pi$
- $5,76\pi$ 100%
- $5,29\pi$
- $6,76\pi$

10 Diagonallarining soni tomonlari sonidan 3 marta ko`p bo`lgan qavariq muntazam ko`p burchakning barcha ichki burchaklari va bitta tashqi burchagi yig`indisini toping.

- 500 °
- 1220 °
- 1300 ° 100%
- 1340 °

11 $log_{x^2-1}(x^4+3x^2)=log_{x^2-1}(2x^3+6x)$ tenglamaning nechta yechimi bor?

- 3 ta
- 4 ta
- 1 ta 100%
- 2 ta

12 Oltin va durdan yasalgan bezakning og`irligi 3 misqol, narxi 24 dinor. Agar 1 misqol oltin 5 dinor, 1 misqol dur 15 dinor tursa, bezakda qancha misqol oltin bor?

- 2,1 100%
- 2,4
- 1,8
- 1,2

13 $a+\frac{1}{a}=2,5$ bo‘lsa, $a^3+a^{-3}-0,125$ ning qiymatini toping.

- 6
- 8 100%
- 11
- 7

14 $(a+7)^2-64$ ni ko‘paytuvchilarga ajrating.

- $(a-3)(a+8)$
- $(a-1)(a+15)$ 100%
- $(a-1)(a+13)$
- $(a+3)(a-8)$

15 Diagonallari o‘zaro perpendikulyar bo‘lgan teng yonli trapetsiyaning yuzasi 289 ga teng. Uning balandligini toping.

- 19
- 17 100%
- 13
- 15

16 Avtomobil haydovchisi birinchi soatda yo`lning yarmini, ikkinchi soatda qolgan yo`lning $\frac{1}{3}$ qismini, uchinchi soatda qolgan 56 km masofani bosib o`tdi. Haydovchi uch soatda jami qancha (km) yo`l bosib o`tgan?

- 112
- 156
- 168 100%
- 144

17 $f(x)=14sin3x\cdot sin4x$ uchun boshlang`ich funksiyani toping.

○	$7\sin x-\sin 7x+C$ 100%
○	$7\cos x-\cos 7x+C$
○	$7\sin x+\sin 7x+C$
○	$-7\cos x-\cos 7x+C$

18	$f(x)=24\sin 3x\cdot\cos 9x$ uchun boshlang`ich funksiyani toping.
○	$-2\cos 6x-\cos 12x+C$
○	$2\cos 6x-\cos 12x+C$ 100%
○	$2\sin 6x-\sin 12x+C$
○	$2\sin 6x+\sin 12x+C$

19	Soddalashtiring: $\dfrac{\sqrt{a-2a^{\frac{1}{2}}b^{\frac{1}{2}}+b}-\dfrac{a-b}{a^{\frac{1}{2}}-b^{\frac{1}{2}}}}{}$; $(a>b\geq 0)$.
○	$2\sqrt{b}$
○	$-2\sqrt{b}$ 100%
○	$-2\sqrt{a}$
○	$2\sqrt{a}$

20	$\sqrt{x-3}-\sqrt{x+1}+2=0$ tenglamaning ildizlari ko‘paytmasini toping.
○	2
○	3 100%
○	4
○	1

21	$-7:(-15)\cdot 795-(-99-(-13)\cdot(-5)):(-17)+416\frac{15}{17}-25$ ifodaning qiymatini toping.
○	$-753\frac{4}{17}$ 100%
○	$-752\frac{7}{17}$

- $753\frac{4}{17}$
- $12\frac{7}{17}$

22 Agar $d:c=-\sqrt{7}$ bo`lsa, d^2-7c^2 ni hisoblang.

- 0 100%
- $\sqrt{7}$
- -7
- 7

23 5927031, 4587, 3069 sonlarining umumiy bo`luvchilari yig`indisini toping.

- 156
- 56
- 48 100%
- 148

24 Agar ABC uchburchakda BE mediana va AD bissektrisalar o`zaro perpendikulyar bo`lsa, AB:AC nisbatni toping.

- 3:1
- 1:2 100%
- 1:3
- 2:1

25 Aylananing markaziy burchagi 60°, u tiralgan yoy uzunligi 10 sm bo`lsa, aylananing radiusini (sm) toping.

- $\frac{24}{\pi}$
- $\frac{30}{\pi}$ 100%
- $\frac{36}{\pi}$

- $\frac{15}{\pi}$

---

26 $7^x \cdot \left(\sqrt{2}\right)^{2x^2-6} - \frac{7^x}{2^{2x}} = 0$ tenglamaning katta ildizini toping.

- 1 100%
- -4
- 3
- -3

---

27 $\frac{m-4\sqrt{m-4}}{2} \cdot \frac{\sqrt[3]{m+4\sqrt{m-4}} \cdot \sqrt[3]{\sqrt{m-4}+2}}{\sqrt[3]{m-4\sqrt{m-4}} \cdot \sqrt[3]{\sqrt{m-4}-2}}$ ifodani soddalashtiring $m \geq 4$, $m \neq 8$).

- $\frac{m}{2}-4$ 100%
- $m-2$
- $\frac{m}{2}+4$
- $m+2$

---

28 $\frac{\sqrt{x^3}-\sqrt{y^3}+\sqrt{xy^2}-\sqrt{x^2y}}{\sqrt[4]{y^5}+\sqrt[4]{x^4y}-\sqrt[4]{xy^4}-\sqrt[4]{x^5}}$ ifodani soddalashtiring. $x \neq y$, $x > 0$, $y > 0$

- 0
- $-\left(\sqrt{x}+\sqrt{y}\right)$
- $-\left(\sqrt[4]{x}+\sqrt[4]{y}\right)$ 100%
- 1

---

29 $f(x) = sine^{-x}$ bo`lsa, $f'(ln\frac{3}{\pi})$ ni toping.

- $\frac{1}{2}$

- $-\frac{\pi}{6}$ 100%
- $\frac{3}{\pi}$
- $\frac{\pi}{3}$

---

30 Agar $\sqrt[3]{r}-\frac{1}{\sqrt[3]{r}}=2$ bo`lsa, $r^3-\frac{1}{r^3}$ ni toping. ($r\in R$)

- 8
- 2786 100%
- 27
- 2794

---

31 $4^{4^x}=2^{2^{2^{x+2}}}$ tenglamani yeching.

- 40 100%
- 8
- 4
- 3

---

32 Bir to`g`ri chiziqda ketma-ket yotuvchi A, B, C va D nuqtalar uchun $AB=CD$ va $BC=12$ ekanligi ma'lum. Bu to`g`ri chiziqda yotmaydigan E nuqtadan B va C nuqtalargacha bo`lgan masofa 10 ga teng. Agar AED uchubrchakning perimetri BEC uchburchakning perimetridan ikki marta katta bo`lsa, AB ni toping.

- 9 100%
- 7,5
- 8,5
- 8

---

33 Ikkita qo`shni yoqlarining markazlari orasidagi masofa $\sqrt{18}$ ga teng bo`lgan kubga tashqi chizilgan shar sirtining yuzini toping.

- 144π
- 125π
- 108π 100%
- 120π

34 $cos\left(\frac{\pi\sqrt{3}}{12}x\right)=13+2\sqrt{12}x+x^2$ tenglama $[-2\pi;2\pi]$ kesmada nechta ildizga ega?

- 2
- 1
- ϕ 100%
- 3

35 $\left(\frac{2log_6 2+log_6 27}{log_6\sqrt[3]{0,25}+log_6\frac{1}{3}}\right)^2$ ni hisoblang.

- 27
- 9 100%
- $9log_6 27$
- 18

36 Tenglamani yeching<!--[if !msEquation]--> $\log_3(3^x+\sin x-\frac{1}{2})=x$ agar <!--[if !msEquation]--> $x\in(0;\pi)$

- <!--[if !msEquation]--> $(\frac{\pi}{6};\frac{5\pi}{6})$
- <!--[if !msEquation]--> $(\frac{\pi}{3};\frac{2\pi}{3})$
- <!--[if !msEquation]--> $(\frac{\pi}{4};\frac{3\pi}{4})$ 100%
- <!--[if !msEquation]--> $(\frac{\pi}{7};\frac{4\pi}{7})$

37 Ifodani soddalashtiring<!--[if !msEquation]--> $\left(\frac{1}{x}-\frac{3}{y}+\frac{2x}{2x+y}\right):\left(\frac{1}{x}-\frac{1}{y}\right)$

- 1
- -1 100%
- <!--[if !msEquation]--> x
- <!--[if !msEquation]--> $-x$

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38 To'g'ri burchakli uchburchakning bitta burchagi 63<!--[if !msEquation]--> $^{\circ}$ ga teng. To'g'ri burchak uchidan chiquvchi balandlik va bissektrissa orasidagi burchakni toping .

- 18<!--[if !msEquation]--> $^{\circ}$ 100%
- 28<!--[if !msEquation]--> $^{\circ}$
- 17<!--[if !msEquation]--> $^{\circ}$
- 27<!--[if !msEquation]--> $^{\circ}$

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39 Boshlang'ich funksiyasini toping y=3<!--[if !msEquation]--> $\sin 3x$+ 7<!--[if !msEquation]--> $\sin 7x$

- 4<!--[if !msEquation]--> $\cos 5x \cos x$ + C
- -2<!--[if !msEquation]--> $\cos 5x \cos x$ + C 100%
- -4<!--[if !msEquation]--> $\cos 5x \cos x$ + C
- 2<!--[if !msEquation]--> $\cos 5x \cos x$ + C

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40 Agar geometrik progressiyada<!--[if !msEquation]--> $b_n = -\frac{3}{8}$,<!--[if !msEquation]--> $b_5 - b_1 = 18$ va <!--[if !msEquation]--> $b_3 - b_1 = 12$ bo'lsa, <!--[if !msEquation]--> n ni toping

- 13 100%
- 17
- 15
- 19

Atestatsiya savollari kerak bulsa murojat eting

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