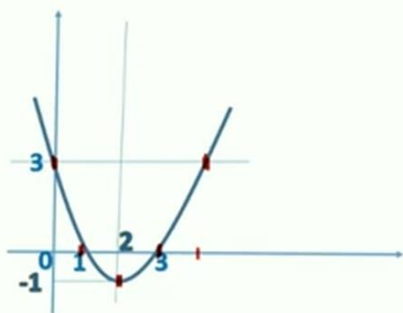


1.1) $f(x) = x^2 - 4x + 3$ funksiya grafigini yasang

$$x_0 = -\frac{b}{2a} = -\frac{-4}{2 \cdot 1} = 2. \quad y_0 = 2^2 - 4 \cdot 2 + 3 = -1 \quad (2; -1)$$

$$x^2 - 4x + 3 = 0 \quad x_1 = 3, \quad x_2 = 1$$

$$f(0) = f(4) = 3$$



1.2) Hisoblang: $\log_{3\sqrt{3}} 27 + \log_{\sqrt{5}} 125$

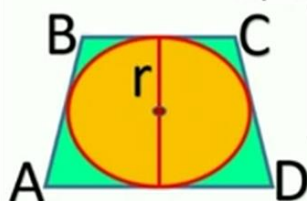
$$\log_{3\sqrt{3}} 27 + \log_{\sqrt{5}} 125 = \log_{3^{1.5}} 3^3 + \log_{5^{0.5}} 5^3 = \frac{3}{1.5} + \frac{3}{0.5} = 2 + 6 = 8$$

1.3) $\sin x + \sqrt{3} \cos x = 2$. Tenglamani yeching:

$$\frac{1}{2} \sin x + \frac{\sqrt{3}}{2} \cos x = 1 \quad \cos \frac{\pi}{3} \sin x + \sin \frac{\pi}{3} \cos x = 1$$

$$\sin\left(\frac{\pi}{3} + x\right) = 1. \quad \frac{\pi}{3} + x = \frac{\pi}{2} + 2k\pi \quad x = \frac{\pi}{6} + 2k\pi, \quad k \in \mathbb{Z}$$

1.4. Teng yonli trapetsiyaga radiusi 4,5 cm bo'lgan aylana ichki chizilgan. Agar trapetsiyaning perimetri 44 cm bo'lsa, uning yuzini toping.



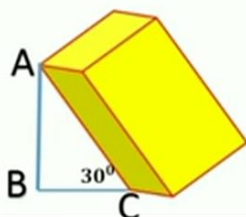
$r = 4,5 \text{ cm}$
 $P = 44 \text{ cm}$
 $S = ?$

$$h = 2r = 2 \cdot 4,5 = 9$$

$$AB + CD = AD + BC = P : 2 = 44 : 2 = 22$$

$$S = \frac{AD + BC}{2} \cdot h = \frac{22}{2} \cdot 9 = 11 \cdot 9 = 99 \text{ (cm}^2\text{)}$$

1.5. Og'ma prizmaning 20 cm ga teng bo'lgan yon qirrasi asos tekisligi bilan 60° li burchak tashkil etadi. Prizmaning balandligi necha cm ga teng?



$$ACB = 30^\circ, \quad AC = 20 \text{ cm}, \quad H = ?$$

$$\frac{H}{AC} = \sin 60^\circ,$$

$$\frac{H}{20} = \frac{\sqrt{3}}{2} \quad H = 10\sqrt{3}$$

11 sinf 2 belet

2.1) Tenglamani yeching: $3^{x^2-7x} = \frac{1}{729}$

$$3^{x^2-7x} = 3^{-6} \quad x^2 - 7x = -6, \quad x^2 - 7x + 6 = 0, \quad x_1 = 1, x_2 = 6$$

2.2) Tengsizlikni yeching: $\sin^2 x + 3\sin x - 4 \geq 0$.

$$\sin x = t, \quad t^2 + 3t - 4 \geq 0, \quad (t+4)(t-1) \geq 0$$

$$\begin{array}{c} + \quad - \quad + \\ -4 \quad 1 \end{array}$$

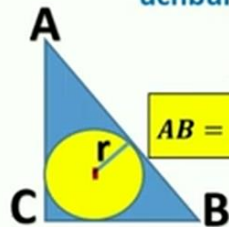
$$t \leq -4 \text{ va } t \geq 1. \quad \sin x \leq -4. \quad \emptyset.$$

$$\sin x \geq 1 \quad x = \frac{\pi}{2} + 2k\pi \quad k \in \mathbb{Z}.$$

2.3) $f(x) = \sin x \cos 3x$ funksiya hosilasini toping.

$$f'(x) = \cos x \cos 3x + \sin x (-3\sin 3x) = \cos x \cos 3x - 3\sin x \sin 3x$$

2.4) Katetlari 6 cm va 8 cm ga teng bo'lgan to'g'ri burchakli uchburchakka ichki chizilgan doira yuzini toping.

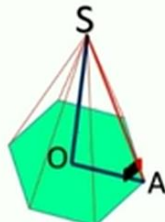


$$BC = 6 \text{ cm}, \quad AC = 8 \text{ cm}, \quad S_r = ?$$

$$AB = \sqrt{6^2 + 8^2} = \sqrt{100} = 10, \quad r = \frac{AC + BC - AB}{2} = \frac{8 + 6 - 10}{2} = 2$$

$$S = 4\pi$$

2.5) Piramidaning asosi tomoni 6 ga teng bo'lgan muntazam oltiburchakdan iborat bo'lib, barcha yon qirralari asos tekisligi bilan 30° li burchak tashkil etadi. Piramida hajmini toping.



$$OA = R = a = 6, \quad \frac{SO}{R} = \tan 30^\circ, \quad \frac{SO}{6} = \frac{1}{\sqrt{3}}, \quad SO = 2\sqrt{3}$$

$$r = \frac{a}{2 \tan \frac{180^\circ}{6}} = \frac{6}{2 \cdot \frac{1}{\sqrt{3}}} = 6 \cdot \frac{\sqrt{3}}{2} = 3\sqrt{3}, \quad V = \frac{1}{3} SH = \frac{1}{3} \cdot \frac{1}{2} \cdot 36 \cdot 3\sqrt{3} \cdot 2\sqrt{3} = 108$$

11 sinf 3 belet

3-BILET

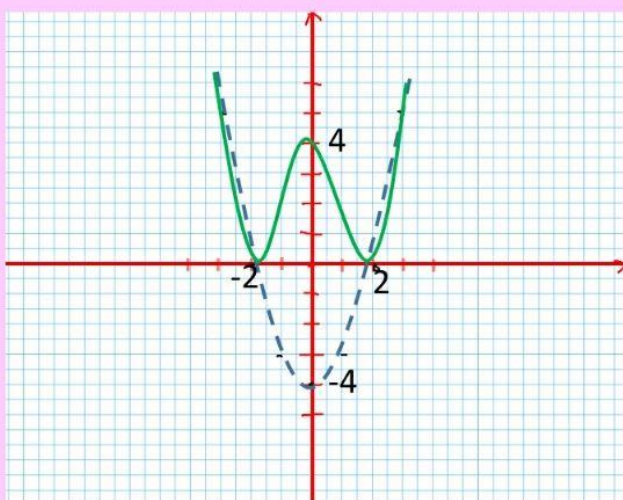
1. Ifodani soddalashtiring: $\left(\frac{\sqrt{a}}{b+\sqrt{ab}} - \frac{\sqrt{a}}{b-\sqrt{ab}}\right) \cdot \frac{b-a}{2\sqrt{ab}}$.

$$= \left(\frac{\sqrt{a}}{\sqrt{b}(\sqrt{b} + \sqrt{a})} - \frac{\sqrt{a}}{\sqrt{b}(\sqrt{b} - \sqrt{a})}\right) \cdot \frac{b-a}{2\sqrt{ab}} =$$

$$= \frac{\sqrt{a}(\sqrt{b} - \sqrt{a}) - \sqrt{a}(\sqrt{b} + \sqrt{a})}{\sqrt{b}(b-a)} \cdot \frac{b-a}{2\sqrt{ab}} =$$

$$\frac{\sqrt{ab} - a - \sqrt{ab} - a}{\sqrt{b}} \cdot \frac{1}{2\sqrt{ab}} = \frac{-2a}{2b\sqrt{a}} = -\frac{\sqrt{a}}{b}$$

2. $f(x) = |x^2 - 4|$ funksiya grafigini yasang.

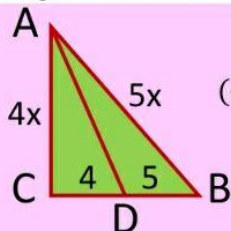


3. $f(x) = \cos 5x \cdot \cos 2x$ funksiya boshlang'ich funksiyasini toping.

$$\cos x \cos y = \frac{1}{2}(\cos(x+y) + \cos(x-y)), \quad f(x) = \frac{1}{2}(\cos 7x + \cos 3x)$$

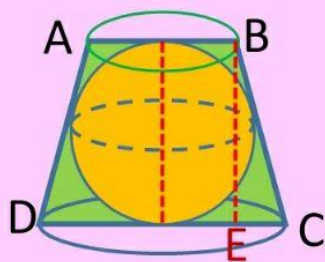
$$F(x) = \frac{1}{2} \left(\frac{1}{7} \sin 7x + \frac{1}{3} \sin 3x \right) + C = \frac{1}{14} \cos 7x + \frac{1}{6} \sin 3x + C$$

4. To'g'ri burchakli uchburchakning kichik katetiga tushirilgan bissektisasi uni 4 cm va 5 cm li kesmalarga ajratadi. Bu uchburchakka tashqi chizilgan aylana radiusining ichki chizilgan aylana radiusiga nisbatini toping.



$CD = 4, \quad DB = 5, \quad AD - bis - sa, \quad \frac{R}{r} = ?$
 $(4x)^2 + 9^2 = (5x)^2 \quad 16x^2 + 81 = 25x^2 \quad 9x^2 = 81, \quad x^2 = 9, \quad x = 3$
 $AC = 4 \cdot 3 = 12, \quad AB = 5 \cdot 3 = 15, \quad BC = 4 + 5 = 9$
 $\frac{R}{r} = \frac{\frac{15}{2}}{\frac{12 + 9 - 15}{2}} = \frac{7,5}{3} = 2,5$

5. Kesik konusga shar ichki chizilgan. Kesik konus asoslari aylanalarining uzunliklari 8π cm va 10π cm ga teng bo'lsa, shar radiusini toping.



$$C_1 = 8\pi, \quad C_2 = 10\pi, \quad R_{shar} = ?$$

$$8\pi = 2\pi R_1, \quad 10\pi = 2\pi R_2,$$

$$R_1 = 4, \quad R_2 = 5$$

$$AB + CD = AD + BC = 4 + 4 + 5 + 5 = 18$$

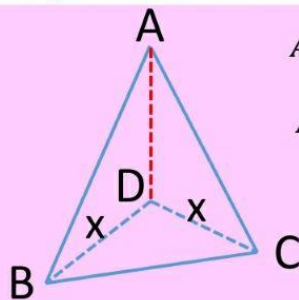
$$AD = BC = 18:2 = 9, \quad EC = 5 - 4 = 1$$

$$H = BE = \sqrt{9^2 - 1^2} = \sqrt{80} = 4\sqrt{5},$$

$$R = H:2 = 4\sqrt{5}:2 = 2\sqrt{5}$$

11 sinf 4 belet

5. Tekislikda yotmaydigan nuqtadan tekislikka uzunliklari 12 cm dan va orasidagi burchak 60° ga teng bo'lgan ikkita og'malar o'tkazilgan. Agar og'malarning tekislikdagi proyeksiyalari o'zaro perpendikulyar bo'lsa, nuqtadan tekislikkacha bo'lgan masofani toping.



$$AB = AC = 12, \quad BAC = 60^\circ, \quad BDC = 90^\circ, \quad AD = ?$$

$$ABC \text{ teng tomonli bundan } BC = AB = 12$$

$$x^2 + x^2 = 12^2 \quad 2x^2 = 144 \quad x^2 = 72$$

$$AD = \sqrt{12^2 - x^2} = \sqrt{144 - 72} = \sqrt{72} = 6\sqrt{2}$$

4-BILET

1. Ko'phadni ko'paytuvchilarga ajrating: $(x^2 + x)^2 - 8(x^2 + x) + 12$.

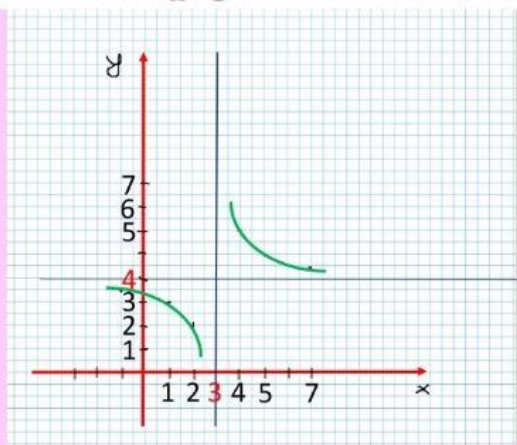
$$x^2 + x = t$$

$$t^2 - 8t + 12 = (t - 6)(t - 2) = (x^2 + x - 6)(x^2 + x - 2)$$

2. Savatda 5 ta qizil, 4 ta sariq, 4 ta oq gul bor. 2 ta qizil, 2 ta oq, 2 ta sariq guldari iborat bo'lgan guldastani necha xil usulda tayyorlash mumkin.

$$C_5^2 \cdot C_4^2 \cdot C_4^2 = \frac{5 \cdot 4}{1 \cdot 2} \cdot \frac{4 \cdot 3}{1 \cdot 2} \cdot \frac{4 \cdot 3}{1 \cdot 2} = 10 \cdot 6 \cdot 6 = 360$$

3. $f(x) = \frac{2}{x-3} + 4$ funksiya grafigini yasang.



x	y
1	3
2	2
-1	3,5
4	6
5	5
7	4,5

4. Muntazam sakkizburchak va oltiburchaklarning eng katta diagonallari teng. Ularning yuzlari nisbatini toping.



$$r = R \cos \frac{180^\circ}{n} \quad S = \frac{1}{2} p r$$

$$a = 2R \sin \frac{180^\circ}{n}$$

$$a_8 = 2R \sin \frac{180^\circ}{8} = 2R \sin 22,5^\circ \quad a_6 = 2R \sin \frac{180^\circ}{6} = 2R \sin 30^\circ = R$$

$$r_1 = R \cos 22,5^\circ \quad r_2 = R \cos 30^\circ = \frac{R}{2}$$

$$S_1 = \frac{1}{2} \cdot 8 \cdot 2R \sin 22,5^\circ \cdot R \cos 22,5^\circ = 4R^2 \sin 45^\circ = 4R^2 \cdot \frac{\sqrt{2}}{2} = 2\sqrt{2}R^2$$

$$S_2 = \frac{1}{2} \cdot 6 \cdot R \cdot \frac{R}{2} = \frac{3R^2}{2}$$

$$\frac{S_1}{S_2} = 2\sqrt{2}R^2 \cdot \frac{2}{3R^2} = \frac{4\sqrt{2}}{3}$$

5- billet

1. $5x^2 - 29x + 20 \leq 0$

$5x^2 - 29x + 20 = 0$

$D = 29^2 - 4 \cdot 5 \cdot 20 = 841 - 400 = 441$

$5(x-5)(x-0,8) \leq 0$

$0,8 \leq x \leq 5$

$x_1 = \frac{29+21}{2 \cdot 5} = 5$

$x_2 = \frac{29-21}{10} = 0,8$



$1+2+3+4+5 = \frac{15}{5} = 3 \quad \text{J: } 3$

2. $b_4 - 9b_2 + b_3 - 9b_1 = 0$

$b_1 8^3 - 9b_1 8 + b_1 8^2 - 9b_1 = 0$

$b_1 8^2(8+1) - 9b_1(8+1) = 0$

$(8+1)(b_1 8^2 - 9b_1) = 0$

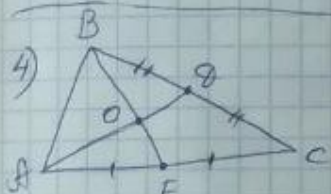
1) $8 = -1$ 2) $b_1 8^2 - 9b_1 = 0$

$b_1(8^2 - 9) = 0$

$b_1 = 0 \quad 8^2 - 9 = 0$

$8^2 = 9$
 $8 = \pm 3$

J: $8 = 3$



$AD = 18$
 $BE = 12$
 $\angle ADB = 120^\circ$
 $S_A = ?$

Yechish:

$BO : OE = 2 : 1 \Rightarrow BO = 8 \quad OE = 4$
 $AO : OD = 2 : 1 \Rightarrow AO = 12 \quad OD = 6$

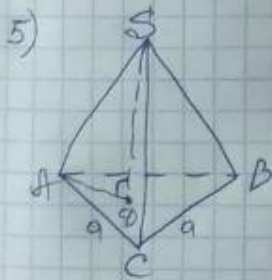
$S_A = 2 \cdot S_{ABE}$

$S_{ABO} = \frac{1}{2} \cdot 8 \cdot 12 \cdot \sin 120^\circ = 48 \cdot \frac{\sqrt{3}}{2} = 24\sqrt{3}$

$S_{AOE} = \frac{1}{2} \cdot 12 \cdot 4 \cdot \sin 60^\circ = 24 \cdot \frac{\sqrt{3}}{2} = 12\sqrt{3}$

$S_{ABE} = 24\sqrt{3} + 12\sqrt{3} = 36\sqrt{3}$

$S_{AAC} = 2 \cdot 36\sqrt{3} = 72\sqrt{3} \quad \text{J: } 72\sqrt{3}$



$SA = AC = a$
 $H = ?$

Yechish: $S_{\text{base}} = \frac{a^2 \sqrt{3}}{4}$

$AD = R = \frac{a}{2 \sin 60^\circ} = \frac{a}{2 \cdot \frac{\sqrt{3}}{2}} = \frac{a}{\sqrt{3}}$

$H = SD = \sqrt{SA^2 - AD^2} = \sqrt{a^2 - \left(\frac{a}{\sqrt{3}}\right)^2} = \sqrt{a^2 - \frac{a^2}{3}} =$

$= \sqrt{\frac{2a^2}{3}} = a\sqrt{\frac{2}{3}}$

J: $a\sqrt{\frac{2}{3}}$

6- Bilet.

1) 0, 1, 3, 5, 7, 8

4 xonali son.

$$\begin{array}{r} \overline{abcd} \\ \downarrow \downarrow \downarrow \downarrow \\ 5543 \end{array}$$

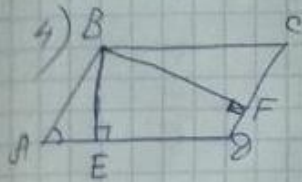
$$5 \cdot 5 \cdot 4 \cdot 3 = 25 \cdot 12 = 300$$

J: 300.

2) x_1 va x_2 sonlari $x^2 - ax + 20 = 0$ $\frac{1}{x_1} + \frac{1}{x_2} = \frac{9}{20}$, $a = ?$
 $x_1 + x_2 = a$ $x_1 \cdot x_2 = 20$ $\frac{1}{x_1} + \frac{1}{x_2} = \frac{9}{20} \Rightarrow \frac{x_1 + x_2}{x_1 x_2} = \frac{9}{20} \Rightarrow$

$$\Rightarrow 9x_1 x_2 = 20(x_1 + x_2) \Rightarrow 9 \cdot 20 = 20a \quad a = 9 \quad J: 9$$

3) $\sin\left(2 \arcsin \frac{1}{3}\right) = 2 \sin\left(\arcsin \frac{1}{3}\right) \cos\left(\arcsin \frac{1}{3}\right) =$
 $= 2 \cdot \frac{1}{3} \cdot \sqrt{1 - \left(\frac{1}{3}\right)^2} = \frac{2}{3} \cdot \sqrt{1 - \frac{1}{9}} = \frac{2}{3} \cdot \sqrt{\frac{8}{9}} = \frac{2}{3} \cdot \frac{2\sqrt{2}}{3} = \frac{4\sqrt{2}}{9}$

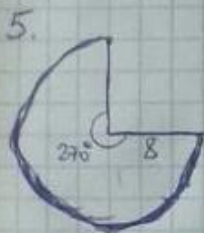


$$\begin{array}{l} BE = 8 \text{ cm} \\ BF = 12 \text{ cm} \\ \angle A : \angle B = 1 : 5 \\ S = ? \end{array}$$

Yechish:
 $\angle A = x$ $\angle B = 5x$
 $x + 5x = 180^\circ$
 $6x = 180^\circ$ $\angle A = 30^\circ$
 $x = 30^\circ$ $\angle B = 150^\circ$

$$\angle A = 30^\circ \Rightarrow AB = 2 \cdot BE = 2 \cdot 8 = 16 \quad CD = 16$$

$$S = CD \cdot BF = 16 \cdot 12 = 192 (\text{cm}^2) \quad J: 192 \text{ cm}^2$$



$$S_{\text{yuz}} = \pi R l = S_{\text{sektor}}$$

$$S_{\text{sektor}} = \frac{\pi R^2 \cdot 270^\circ}{360^\circ} = \frac{\pi \cdot 8^2 \cdot 3}{4} = 48\pi$$

$$S_{\text{yuz}} = 48\pi$$

$$\pi \cdot R \cdot l = 48\pi$$

$$R = 6$$

$$\triangle ABC \text{ da } AB = BC = 8 \quad AC = 2 \cdot 6 = 12$$

$$OB = \sqrt{8^2 - 6^2} = \sqrt{64 - 36} = \sqrt{28} = 2\sqrt{7}$$

$$S_{\triangle ABC} = \frac{1}{2} \cdot 12 \cdot 2\sqrt{7} = 12\sqrt{7}$$

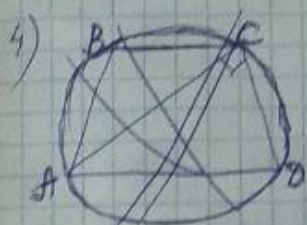
$$r = \frac{2S}{a+b+c} = \frac{2 \cdot 12\sqrt{7}}{8+8+12} = \frac{24\sqrt{7}}{28} = \frac{6\sqrt{7}}{7}$$

7- bilet.

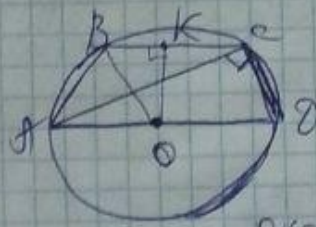
1) 1 dan 75 gacha tub sonlarni yozamiz:
 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47,
 53, 59, 61, 67, 71, 73 — 21 ta.
 $P(A) = \frac{21}{75} = \frac{7}{25}$; $J: \frac{7}{25}$;

2) $f(x) = 8x^3 - 5$ $A(1; 4)$
 $F(x) = 8 \cdot \frac{x^4}{4} - 5x + C = 2x^4 - 5x + C$
 $4 = 2 \cdot 1^4 - 5 \cdot 1 + C$ $C = 4 + 3$ $C = 7$.
 $J: F(x) = 2x^4 - 5x + 7$.

3) $\log_3(x-2) - \log_3 \sqrt{x-4} = 1$
 $\log_3(x-2) - \log_3(x-4)^{\frac{1}{2}} = 1$
 $\log_3(x-2) + \log_3(x-4) = 1$
 $\log_3(x-2)(x-4) = \log_3 3$
 $x^2 - 6x + 8 = 3$
 $x^2 - 6x + 5 = 0$
 $x_1 = 5$
 $x_2 = 1$ $J: x = 5$



$R = 6$
 $BC = 4$
 $AC \perp CD$
 $S = ?$



$AO = OD = 6$

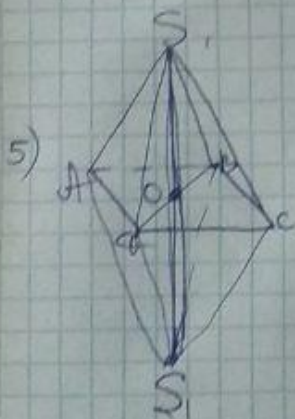
$AD = 12$

$BK = 2$

$OK = h = \sqrt{6^2 - 2^2} = \sqrt{32} = 4\sqrt{2}$

$S = \frac{4+12}{2} \cdot 4\sqrt{2} = 32\sqrt{2}$.

$J: 32\sqrt{2}$.



$SS_1 = 18$
 $V = ?$

$SO = 18 : 2 = 9$.

$BO = x\sqrt{2}$

$BO = \frac{x\sqrt{2}}{2}$

$SB = x$.

$\triangle SOB$ dan

$SO^2 + OB^2 = SB^2$

$9^2 + \left(\frac{x\sqrt{2}}{2}\right)^2 = x^2$

$81 + \frac{x^2}{2} = x^2$

$\frac{x^2}{2} = 81$

$x^2 = 162$
 $x = 9\sqrt{2}$.

$S_{\text{osn}} = x^2 = 162$.

$V = 2 \cdot \frac{1}{3} \cdot S_{\text{osn}} \cdot h = \frac{2}{3} \cdot 162 \cdot 9 = 972$

$J: 972$.

8-BILET

1. $4^{x-3} = 2\sqrt{2^{\frac{3x-5}{2}}}$ tenglamani yeching.

$$2^{2(x-3)} = 2^{\frac{3 \cdot 3x-5}{2}}$$

$$2^{2x-6} = 2^{\frac{3x-5}{2}}$$

$$2x - 6 = \frac{3x - 5}{2}$$

$$4x - 12 = 3x - 5$$

$$x = 7$$

2. $f(x) = 2 + 6\cos^2(2x + 2)$ funksiyaning qiymatlar to'plamini toping.

$$-1 \leq \cos x \leq 1 \quad 0 \leq \cos^2 x \leq 1$$

$$f_{\min}(x) = 2 + 6 \cdot 0 = 2 \quad \text{va} \quad f_{\max}(x) = 2 + 6 \cdot 1 = 8$$

$$2 \leq f(x) \leq 8 \quad J: [2; 8]$$

3. $f(x) = \frac{2x+5}{x+1}$ funksiga $x_0 = 2$ nuqtada o'tkazilgan urinma tenglamasini yozing.

$$y = f(x_0) + f'(x_0)(x - x_0)$$

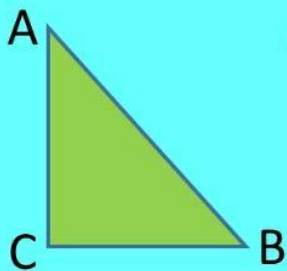
$$f(x_0) = \frac{2 \cdot 2 + 5}{2 + 1} = 3 \quad f'(x) = \frac{2(x+1) - 1(2x+5)}{(x+1)^2} = \frac{-3}{(x+1)^2}$$

$$f'(2) = \frac{-3}{(2+1)^2} = -\frac{1}{3}$$

$$y = 3 - \frac{1}{3}(x - 2) = -\frac{1}{3}x + 3\frac{2}{3}$$

$$y = -\frac{1}{3}x + 3\frac{2}{3}$$

4. To'g'ri burchakli uchburchakning gipotenuzasi 9 cm. Agar unga ichki chizilgan aylananing radiusi 5 cm bo'lsa, uchburchakning perimetrini toping.



AB=9 cm, r=5 cm, P=?

$$r = \frac{a + b - c}{2} = \frac{a + b - 9}{2} = 5$$

$$a + b - 9 = 10 \quad a + b = 19$$

$$P = a + b + c = 19 + 9 = 28 \text{ (cm)}$$

11 sinf 9 belet

9-BILET

1. Arifmetik progressiyada $S_{10} = 175$, $S_{20} = 325$ bo'lsa, S_{30} ni toping.

$$S_{10} = \frac{2a_1 + 9d}{2} \cdot 10 = 10a_1 + 45d, \quad 10a_1 + 45d = 175, \quad 2a_1 + 9d = 35$$

$$S_{20} = \frac{2a_1 + 19d}{2} \cdot 20 = 20a_1 + 190d, \quad 20a_1 + 190d = 325, \quad 4a_1 + 38d = 65$$

$$S_{30} = \frac{2a_1 + 29d}{2} \cdot 30 = 30a_1 + 435d,$$

$$4a_1 + 18d = 70$$

$$4a_1 + 38d = 65$$

$$2a_1 + 9 \cdot (-0,25) = 35 \quad 2a_1 = 35 + 2,25$$

$$2a_1 = 37,25 \quad a_1 = 18,625$$

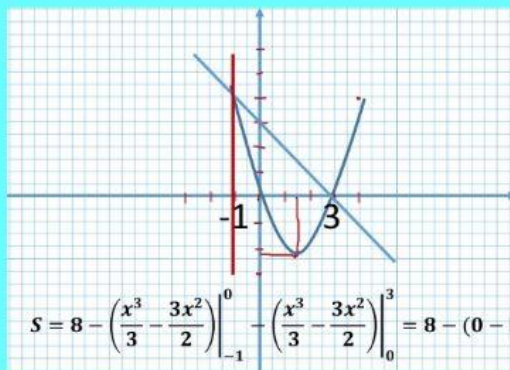
$$-20d = 5, \quad d = -0,25$$

$$S_{30} = 30 \cdot 18,625 + 435 \cdot (-0,25) = 558,75 - 108,75 = 450$$

2. 30 ta o'quvchidan matematika, fizika va kimyo fan olimpiadalariga bittadan o'quvchini necha xil usulda tanlab olish mumkun?

$$M \quad F \quad K \quad 1 \quad 2 \quad 3 \quad 1 \quad 1 \quad 3 \quad ? \quad 30 \cdot 29 \cdot 28 = 24360$$

3. $f(x) = x^2 - 3x$ funksiya grafigi va $y = -x + 3$ tog'ri chiziqning kesishishidan hosil bo'lgan soha yuzini toping.



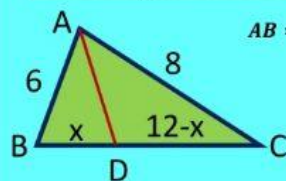
$$x_0 = -\frac{-3}{2 \cdot 1} = 1,5$$

$$y_0 = 1,5^2 - 3 \cdot 1,5 = -2,25$$

$$S = \frac{4 \cdot 4}{2} - \int_{-1}^0 (x^2 - 3x) dx + \left(- \int_0^3 (x^2 - 3x) dx \right)$$

$$S = 8 - \left(\frac{x^3}{3} - \frac{3x^2}{2} \right) \Big|_{-1}^0 - \left(\frac{x^3}{3} - \frac{3x^2}{2} \right) \Big|_0^3 = 8 - \left(0 - \left(-\frac{1}{3} - \frac{3}{2} \right) \right) - \left(\frac{27}{3} - \frac{27}{2} - 0 \right) = 8 - \frac{11}{6} + \frac{27}{6} = 5\frac{1}{3}$$

4. Tomoni 6 cm, 8 cm, 12 cm ga teng bo'lgan uchburchakning katta tomonig; tushirilgan bissektrisasi bu tomonni qanday uzunlikdagi kesmalarga ajratadi?

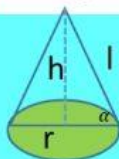


$$AB = 6, \quad AC = 8, \quad BC = 12 \quad \text{va} \quad AD - \text{bis} - \text{sa} \quad \text{bo'lsa} \quad BD, DC = ?$$

$$\frac{6}{x} = \frac{8}{12-x} \quad 72 - 6x = 8x, \quad 14x = 72$$

$$x = \frac{72}{14} = \frac{36}{7} = 5\frac{1}{7} \quad BD = 5\frac{1}{7} \quad DC = 12 - 5\frac{1}{7} \quad DC = 6\frac{6}{7}$$

5. Konusning yasovchisi 25 ga, uning asos tekisligi bilan tashkil qilgan burchagining sinusi 0,6 ga teng. Konus o'q kesimining yuzini toping.



$$l = 25 \quad \sin \alpha = 0,6 \quad S_{o'q} = ?$$

$$\frac{h}{l} = \sin \alpha \quad \frac{h}{25} = 0,6 \quad h = 15, \quad r = \sqrt{25^2 - 15^2} = 20$$

$$S = \frac{1}{2} dh = \frac{1}{2} \cdot 40 \cdot 15 = 300$$