6-variant 2017 yil spectrum
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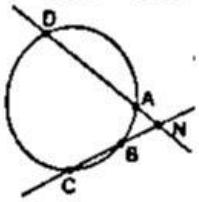
6-variant

1. Aylana A, B, C, D nuqtalar bilan yoylarga ajratilgan. Yoylar $\cup AB : \cup BC : \cup CD : \cup DA = 3:2:13:7$ nisbatda. AD va BC kesishguncha davom ettirilgan. $AD \cap BC = N$. $\angle ANB$ ni toping.

Yechish:



$\cup AB : \cup BC : \cup CD : \cup DA = 3:2:13:7$

$\cup AB + \cup BC + \cup CD + \cup DA = 360°$

$3x + 2x + 13x + 7x = 360°$

$25x = 360°$

$x = \frac{360°}{25}$

$\angle ANB = \frac{\cup CD - \cup AB}{2}$

$\angle ANB = \frac{13x - 3x}{2} = 5x = 5 \cdot \frac{360°}{25} = \frac{360°}{5} = 72°.$

Javob: 72°.

2. a, b, c – vektorlar. $|\vec{a}| = 2$, $|\vec{b}| = 3$, $|\vec{c}| = 4$ va $\angle(\vec{a};\vec{b}) = \angle(\vec{a};\vec{c}) = 60°$, $\vec{b} \perp \vec{c}$ bo'lsa, $|3\vec{a} - \vec{b} + \vec{c}|$ ning qiymatini toping.

Berilgan:

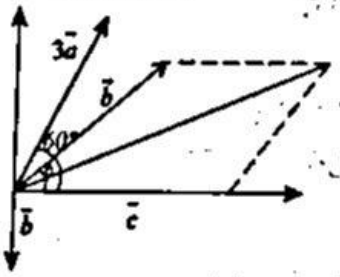
$|\vec{a}| = 2$, $|\vec{b}| = 3$, $|\vec{c}| = 4$

$\angle(\vec{a};\vec{b}) = \angle(\vec{a};\vec{c}) = 60°$

$\vec{b} \perp \vec{c}$

$|3\vec{a} - \vec{b} + \vec{c}| - ?$

Yechish:



Parallepiped qoidasiga ko'ra:

$1) |3\vec{a} - \vec{b} + \vec{c}|^2 = 9\vec{a}^2 - 6\vec{a}(\vec{b} - \vec{c}) +$

$+ \vec{b}^2 - 2\vec{b}\vec{c} + \vec{c}^2 = 9\vec{a}^2 - 6\vec{a}\vec{b} + 6\vec{a}\vec{c} +$

$+ \vec{b}^2 - 2\vec{b}\vec{c} + \vec{c}^2$

$2) \vec{a}^2 = |\vec{b}|^2 = 4$

$b^2 = |\vec{b}|^2 = 9$

$c^2 = |\vec{c}|^2 = 16$

$3) \vec{a} \cdot \vec{b} = |\vec{a}| \cdot |\vec{b}| \cdot \cos 60° = 2 \cdot 3 \cdot \frac{1}{2} = 3$

$\vec{a} \cdot \vec{c} = |\vec{a}| \cdot |\vec{c}| \cdot \cos 60° = 2 \cdot 4 \cdot \frac{1}{2} = 4$

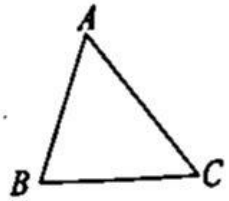
$\vec{b} \cdot \vec{c} = |\vec{b}| \cdot |\vec{c}| \cdot \cos 90° = 0$

4) $|3\vec{a}-\vec{b}+\vec{c}|^2 = 9\cdot4 - 6\cdot3 + 6\cdot4 + 9 -$
$- 0 + 16 = 36 - 18 + 24 + 9 + 16 = 67$
$|3\vec{a}-\vec{b}+\vec{c}| = \sqrt{67}$.

Javob: $\sqrt{67}$.

3. ABC uchburchakda B va C burchaklari mos ravishda $\frac{\pi}{3}$ va $\frac{\pi}{4}$. $AB = \frac{7\sqrt{6}}{2}$ sm bo'lsa, AC tomon uzunligini toping.

Berilgan:
ΔABC
$\angle B = \frac{\pi}{3}$, $\angle C = \frac{\pi}{4}$
$AB = \frac{7\sqrt{6}}{2}$ sm
$AC - ?$



Yechish:
Sinuslar teoremasiga ko'ra:

$$\frac{AB}{\sin C} = \frac{AC}{\sin B} \Rightarrow \frac{\frac{7\sqrt{6}}{2}}{\sin\frac{\pi}{4}} = \frac{AC}{\sin\frac{\pi}{3}}$$

$$AC = \left(\frac{7\sqrt{6}}{2}\cdot\frac{\sqrt{3}}{2}\right):\frac{\sqrt{2}}{2} =$$

$$= \frac{7\cdot3\cdot\sqrt{2}}{\cancel{2}}\cdot\frac{\cancel{2}}{\sqrt{2}} = \frac{21}{2} = 10{,}5 \text{ sm}.$$

Javob: 10,5 sm.

4. $\frac{1}{a(a-b)(a-c)} + \frac{1}{b(b-a)(b-c)} + \frac{1}{c(c-a)(c-b)}$ ifodani soddalashtiring.

Yechish:
$\frac{1}{a(a-b)(a-c)} + \frac{1}{b(b-a)(b-c)} + \frac{1}{c(c-a)(c-b)}$ *ifodani soddalashtiramiz.*
Umumiy maxrajga keltiramiz.

$$\frac{1}{a(a-b)(a-c)} + \frac{1}{b(b-a)(b-c)} + \frac{1}{c(c-a)(c-b)} =$$

$$= \frac{bc(b-c) - ac(a-c) + ab(a-b)}{abc(a-b)(b-c)(a-c)} =$$

$$= \frac{b^2c - bc^2 - a^2c + ac^2 + a^2b - ab^2}{abc(a-b)(b-c)(a-c)} =$$

$$= \frac{(a-b)(b-c)(a-c)}{abc(a-b)(b-c)(a-c)} = \frac{1}{abc}.$$

Javob: $\frac{1}{abc}$.

5. $x < 4$ bo'lsa, $3x + 2y - 6 = 0$ tenglamadan y ning qiymatlarini toping.

Yechish:
$x < 4$ bo'lsa, $3x + 2y - 6 = 0$ tenglamadan y ning qiymatini topamiz.
$3x + 2y - 6 = 0$
$x = \frac{6-2y}{3}$, $\frac{6-2y}{3} < 4$
$6 - 2y < 12$
$-2y < 6$
$y > -3$.

Javob: $y > -3$.

6. $y = \frac{\sqrt{6x - x^2 - 5} + \sqrt{x-3}}{\sqrt{x^2 + 8x + 18}}$ funksiyaning aniqlanish sohasini toping.

Yechish:

$$\begin{cases} 6x - x^2 - 5 \ge 0 \\ x - 3 \ge 0 \\ x^2 + 8x + 18 > 0 \end{cases} \Rightarrow \begin{cases} x^2 - 6x + 5 \le 0 \\ x \ge 3 \\ x \in R \end{cases} \Rightarrow$$

$$\Rightarrow \begin{cases} 1 \le x \le 5 \\ x \ge 3 \end{cases} \Rightarrow 3 \le x \le 5$$

$[3; 5]$.

Javob: [3; 5].

7. a va b natural sonlarning eng katta umumiy bo'luvchilari 2 ga teng bo'lsa, $5a+$ va a sonlarning umumiy bo'luvchilari nechta

Yechish:

EKUB(a; b) = 2
EKUB(5a + b; a) = ?
Masalan, a = 6, b = 14, EKUB(6; 14) = 2
5a + b = 5·6 + 14 = 44
44 va 6 EKUB(44; 6) = 2.

Javob: 2.

8. Hisoblang: $\left(\sqrt{28}+\sqrt{12}\right)\cdot\sqrt{10-\sqrt{84}}$.

Yechish:

1) $\sqrt{10-\sqrt{84}}=\sqrt{10-2\sqrt{21}}=$

$=\sqrt{10-2\cdot\sqrt{7}\cdot\sqrt{3}}=\sqrt{(\sqrt{7}-\sqrt{3})^2}=\sqrt{7}-\sqrt{3}.$

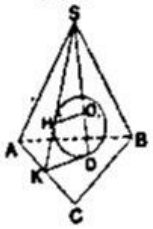
2) $\sqrt{28}+\sqrt{12}=2\sqrt{7}+2\sqrt{3}=2(\sqrt{7}+\sqrt{3})$

3) $2(\sqrt{7}+\sqrt{3})\cdot(\sqrt{7}-\sqrt{3})=2(7-3)=8.$

Javob: 8.

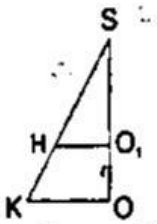
9. Muntazam uchburchakli piramidaning apofemasi 5 ga, piramidaning balandligi esa 4 ga teng. Piramidaga chizilgan ichki sharning hajmini toping.

Yechish:



SABC muntazam uchburchakli piramida
SK = h_a = 5
SO = H = 4
V_{shar} = ?

1) *AB = BC = AC = a, $OO_1 = r$*
2) *$O_1H \perp SK$, $O_1H = OO_1 = r$*
$KO^2 = SK^2 - SO^2 = 5^2 - 4^2 = 3^2$, KO = 3.
KO = KH = 3
3)



ΔSOK va ΔSO_1H o'xshash.
SH = SK – KH = 5 – 3 = 2

$$\frac{SO}{SH_1}=\frac{KO}{HO_1}$$

$$\frac{4}{2}=\frac{3}{r},\ r=\frac{3}{2}$$

4) $V=\frac{4}{3}\pi r^3=\frac{4}{3}\pi\cdot\left(\frac{3}{2}\right)^3=\frac{4}{3}\pi\cdot\frac{27}{8}=\frac{9\pi}{2}.$

Javob: $\frac{9\pi}{2}$.

10. Qarang: **1-variant 20-savol (7-bet).**

11. 2001 ta butun musbat sonning ko'paytmasi 105 ga, yig'indisi 2021 ga teng. Bu sonlarning eng kattasi nimaga teng?

Yechish:

2001 ta butun musbat sonning ko'paytmasi 105 ga, yig'indisi 2021 ga teng.
$a_1 \ldots a_{2001}$ – 2001 ta butun son.
$a_1 \cdot a_2 \cdot \ldots \cdot a_{2001} = 105$
$a_1 + a_2 + \ldots + a_{2001} = 2021$
Ko'paytmasi 105, yig'indisi 2021 bo'lgan 2001 sonlar 1999 ta 1 va 7, 15 dan iborat, chunki

$$\underbrace{1\cdot1\cdot\ldots\cdot1}_{1999\text{ta}}\cdot7\cdot15=105$$

$$\underbrace{1+1+\ldots+1}_{1999}+7+15=2021$$

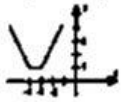
Bu sonlardan eng kattasi 15.

Javob: 15.

12. $y=\sqrt{x^2+8x+16}+\sqrt{x^2+6x+9}$ funksiyaning eng kichik qiymatini toping.

Yechish:

$y=\sqrt{x^2+8x+16}+\sqrt{x^2+6x+9}$
y_{min} = ?
$y=\sqrt{(x+4)^2}+\sqrt{(x+3)^2}=|x+4|+|x+3|$
y = |x + 4| + |x + 3| funksiya grafigini chizamiz.



Funksiya eng kichik qiymati 1.

Javob: 1.

13. Uchburchakning uchlari to'g'ri burchakli dekart koordinatalar sistemasida quyidagicha berilgan.

Berilgan:
A(0; 0)
$B\left(-\frac{1}{2};6\right)$
C(–1; 0)
S_{ABC} = ?

Yechish:

ΔABC teng yonli.
AC – asos, AC = 1
BD – balandlik, BD = 6

$S_{ABC} = \frac{AC \cdot BD}{2} = \frac{1 \cdot 6}{2} = 3.$

Javob: 3.

14. Agar $f(x) = mx^2 - (m-10)x - 2$ parabolaning simmetriya o'qi tenglamasi $x = -2$ bo'lsa, m ning qiymatini toping.

Yechish:

$f(x) = mx^2 - (m-10)x - 2$

Simmetriya o'qi tenglamasi: $x = -2$.

$m = ?$

Simmetriya o'qi tenglamasi: $x = -\frac{b}{2a}$,

bundan $-2 = \frac{m-10}{2m}$.

$-4m = m - 10$

$5m = 10,\ m = 2.$

Javob: 2.

15. $y = \log_2(\sin^2 3x + \cos^2 3x)$ funksiyaning eng kichik musbat davrini toping.

Yechish:

Asosiy trigonometrik ayniyatga ko'ra

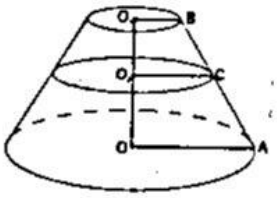
$\sin^2 3x + \cos^2 3x = 1$

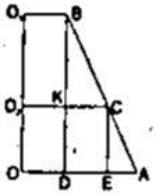
$y = \log_2 1 = 0$, $y = 0$ to'g'ri chiziq davriy funksiya emas.

Javob: mavjud emas.

16. Kesik konus asoslari yuzalari 1 m^2 va 49 m^2. Parallel kesim yuzi asoslari yuzalari yig'indisining yarmiga teng bo'lsa, kesim balandlikni qanday nisbatda bo'ladi?

Yechish:





$S_1 = \pi r^2 = 1,\ r = \frac{1}{\sqrt{\pi}}$

$S_2 = \pi R^2 = 49,\ R = \frac{7}{\sqrt{\pi}}$

$S_k = \frac{S_1 + S_2}{2} = \frac{1+49}{2} = 25$

$S_k = \pi R_1^2,\ R_1 = \frac{5}{\sqrt{\pi}}$

ΔBKC va ΔCEA o'xshash

$\frac{BK}{KC} = \frac{CE}{EA}$

$H = BK + KD = O_1O_2 + O_2O$

$KC = \frac{5}{\sqrt{\pi}} - \frac{1}{\sqrt{\pi}} = \frac{4}{\sqrt{\pi}},$

$EA = OA - O_2C = \frac{7}{\sqrt{\pi}} - \frac{5}{\sqrt{\pi}} = \frac{2}{\sqrt{\pi}}$

$\frac{OO_2}{O_2O_1} = \frac{\frac{2}{\sqrt{\pi}}}{\frac{4}{\sqrt{\pi}}} = \frac{2}{4} = \frac{1}{2}.$

Javob: $\frac{1}{2}$.

17. Sistemani yeching: $\begin{cases} x^2 + x > 0 \\ 1 - x < 0 \end{cases}$

Yechish:

$\begin{cases} x^2 + x > 0 \\ 1 - x < 0 \end{cases} \Rightarrow \begin{cases} x(x+1) > 0 \\ -x < -1 \end{cases} \Rightarrow$

$\Rightarrow \begin{cases} x < -1,\ x > 0 \\ x > 1 \end{cases} \Rightarrow x > 1.$

$(1; \infty)$.

Javob: $(1; \infty)$.

18. $\sin^6 x + \cos^6 x$ ifodaning eng katta qiymatini toping.

Yechish:

$\sin^6 x + \cos^6 x \to max.$

1) $\sin^6 x + \cos^6 x = (\sin^2 x)^3 + (\cos^2 x)^3 =$

$= (\sin^2 x + \cos^2 x)(\sin^4 x - \sin^2 x \cos^2 x +$

$+ \cos^4 x) = \sin^4 x - \sin^2 x \cos^2 x + \cos^4 x =$

$= (\sin^2 x + \cos^2 x)^2 - 3\sin^2 x \cos^2 x = 1 - \frac{3}{4}\sin^2 2x$

2) $0 \le \sin^2 2x \le 1.$

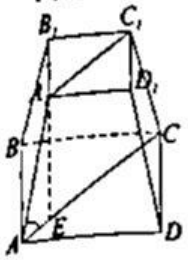
3) ifodaning maksimum qiymati

$1 - \frac{3}{4}\sin^2 2x = 1 - \frac{3}{4} \cdot 0 = 1.$

Javob: 1.

19. Muntazam to'rtburchakli kesik piramidaning asos tomonlari $3\sqrt{2}$ va $6\sqrt{2}$ ga teng. Yon qirrasi asos tekislik bilan 45° li burchakni tashkil etadi. Kesik piramidaning hajmini toping.

Yechish:



$ABCDA_1B_1C_1D_1$ muntazam to'rtburchakli kesik piramida

$AB = a = 6\sqrt{2}$

$A_1B_1 = b = 3\sqrt{2}$

$\angle A_1AC = 45°$

$V = ?$

$$V = \frac{1}{3}\cdot H(S_1 + \sqrt{S_1S_2} + S_2)$$

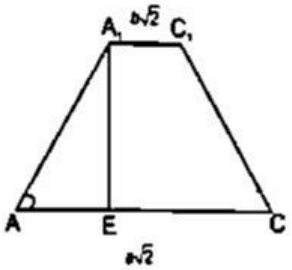
$S_1 = a^2$,

$S_2 = b^2$

$A_1C_1 = b\sqrt{2}$,

$AC = a\sqrt{2}$

$A_1E = H$



$\angle A_1AE = \angle AA_1E = 45°$

$$AE = A_1E = H = \frac{a\sqrt{2} - b\sqrt{2}}{2}$$

$$H = \frac{a-b}{\sqrt{2}} = \frac{6\sqrt{2} - 3\sqrt{2}}{\sqrt{2}} = 3$$

$$V = \frac{1}{3}\cdot 3(72 + 18 + 36) = 126.$$

Javob: 126.

20. $P(x) = (3x-1)^{2017}\cdot(2x-1)^{2016} + (4x-3)^2\cdot(6x-5)^2 + 2$ ko'phad koeffitsiyentlarining yig'indisni toping.

Yechish:

Ko'phadning koeffitsiyentlari yig'indisini topish uchun P(1) dagi qiymatini topish kerak.

$P(1) = (3\cdot1-1)^{2017}\cdot(2\cdot1-1)^{2016} + (4\cdot1-3)^2\cdot(6\cdot1-5)^2 + 2 = 2^{2017}\cdot1 + 1\cdot1 + 2 = 2^{2017} + 3.$

Javob: $2^{2017} + 3$.

21. Qarang: 5-variant 20-savol (41-bet).

22. $f(x) = \sqrt{-x^2 + 4x + 32} - \frac{2}{x-8}$ funksiyaning aniqlanish sohasiga kiruvchi butun sonlar nechta?

Yechish:

$$f(x) = \sqrt{-x^2 + 4x + 32} - \frac{2}{x-8}$$

$D(y) = ?$

$$1)\ \begin{cases} -x^2 + 4x + 32 \ge 0 \\ x - 8 \ne 0 \end{cases} \Rightarrow$$

$$\Rightarrow \begin{cases} x^2 - 4x - 32 \le 0 \\ x \ne 8 \end{cases} \Rightarrow \begin{cases} (x+4)(x-8) \le 0 \\ x \ne 8 \end{cases}$$

$-4 \le x < 8.$

2) D(y) = [–4; 8) oraliqqa tegishli butun sonlar 12 ta.

Javob: 12.

23. Hisoblang: $\left(\frac{0{,}11}{0{,}2} + \frac{0{,}2}{0{,}11}\right)\cdot\frac{22}{52{,}1}$.

Yechish:

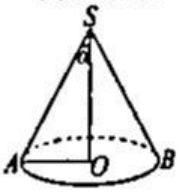
$$\left(\frac{0{,}11}{0{,}2} + \frac{0{,}2}{0{,}11}\right)\cdot\frac{22}{52{,}1} = \left(\frac{11}{20} + \frac{20}{11}\right)\cdot\frac{22}{52{,}1} =$$

$$= \frac{121 + 400}{20\cdot11}\cdot\frac{220}{521} = \frac{521}{220}\cdot\frac{220}{521} = 1.$$

Javob: 1.

24. Konusning asos yuzasi yon sirtning yuzasidan 3 marta kichik. Yasovchi bilan balandlik qanday burchakni tashkil etadi?

Yechish:



$S_{yon} = 3\cdot S_{asos}$

$\angle ASO = ?$

$1)\ S_{yon} = \pi Rl,$

$S_{asos} = \pi R^2$

$\pi Rl = 3\pi R^2,\ l = 3R$

$$2)\ \sin\alpha = \frac{R}{l} = \frac{R}{3R} = \frac{1}{3},$$

$$\alpha = \arcsin\frac{1}{3}.$$

Javob: $\arcsin\frac{1}{3}$.

25. **Qarang: 1-variant 1-savol (3-bet).**

26. Musbat x, y sonlar uchun $a=\frac{x+y}{2}$ va $b=\sqrt{xy}$ bo'lsin. Qaysi tengsizlik har doim o'rinli?

Yechish:

$x>0$, $y>0$ sonlar uchun: $a=\frac{x+y}{2}$, $b=\sqrt{xy}$. x, y sonlarning o'rta arifmetigi o'rta geometrigidan kichik emas.

$\frac{x+y}{2}\geq\sqrt{xy}$. Demak, $a\geq b$.

Javob: $a\geq b$.

27. A(0; –1) va B(5; 4) nuqtalardan o'tuvchi to'g'ri chiziq bilan $2x+y=0$ to'g'ri chiziqning kesishish nuqtasining koordinatasini toping.

Yechish:

A(0; –1) va B(5; 4) to'g'ri chiziq tenglamasini tuzamiz.

$y=kx+b$

A(0; –1) da $-1=b$

B(5; 4) da $4=5k+b$, $b=-1$

$4=5k-1$

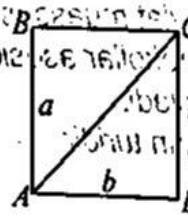
$5k=5$, $k=1$

$y=x-1$ to'g'ri chiziq va $2x+y=0$ to'g'ri chiziqning kesishish nuqtasi koordinatalari $\left(\frac{1}{3};-\frac{2}{3}\right)$.

Javob: $\left(\frac{1}{3};-\frac{2}{3}\right)$.

28. Tomonlari 60 va 65 ga teng bo'lgan to'g'ri to'rtburchak birlik kvadratchalarga bo'lingan. Uning diagonali birlik kvadratchalarning uchlari bo'lmish nuqtalarning nechtasidan o'tadi?

Yechish:



AB = a,

AD = b

a = 60, b = 65

AC – diagonal.

To'g'ri to'rtburchak diagonali uchi kvadratchalar 2 tasining uchi bo'lishi mumkin.

Javob: 2.

29. ABCD to'rtburchakda $\angle A=90°$, $\angle C=\angle D=60°$, CD = 12 va $AB=2\sqrt{3}$ bo'lsa, BC tomon uzunligini toping.

Berilgan:

ABCD – to'rtburchak

$\angle A=90°$

$\angle C=60°$

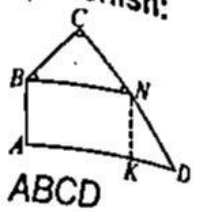
$\angle D=60°$

CD = 12

$AB=2\sqrt{3}$

BC = ?

Yechish:



ABCD to'rtburchakda

$\angle A=90°$, $\angle C=\angle D=60°$,

$\angle B=150°$

$BN\|AD$, $BN=AK$

$AB\|NK$, $AB=NK=2\sqrt{3}$

ΔNKD to'g'ri burchakli

$tg60°=\frac{NK}{KD}$,

$KD=\frac{2\sqrt{3}}{\sqrt{3}}=2$

$ND=2\cdot KD=2\cdot 2=4$

$CN=CD-ND=12-4=8$.

Javob: 8.

30. $3x^2-18x-3\geq\alpha$ tengsizlik x ning ixtiyoriy qiymatida o'rinli bo'ladigan a ning eng katta qiymatini toping.

Yechish:

$ax^2+bx+c>0$ tengsizlik x ning ixtiyoriy qiymatida o'rinli bo'lishi uchun $a>0$, $D\leq 0$ bo'lishi kerak.

$3x^2-18x-3-a\geq 0$

$D=18^2-4\cdot 3\cdot(-3-a)\leq 0$

$27+a+3\leq 0$,

$a\leq -30$

$a\in(-\infty;-30]$

a ning eng katta qaymati –30.

Javob: –30.

31. Qarang: 4-variant 31-savol (35-bet).

32. Eng kichik axborot o'lchov birligini ko'rsating.

Yechish:

Barcha raqamli uskunalarda axborot ikkilik sanoq sistemasida xotirada saqlanadi, ya'ni 0 va 1 raqamlari orqali ifodalanadi. Bir bit 0 yoki 1 ga tengligidan axborotning eng kichik o'lchov birligi bit ekanligi kelib chiqadi.

Javob: bit.

33. Ikkilik sanoq sistemasida amallarni bajaring:
$11100 \cdot (1 \cdot 2^5 + 1 \cdot 2^4 + 1 \cdot 2^2 + 1 \cdot 2^1)$.

Yechish:

$$11100 \cdot (1 \cdot 2^5 + 1 \cdot 2^4 + 1 \cdot 2^2 + 1 \cdot 2^1) = 11100 \cdot (100000 + 10000 + 100 + 10) = 11100 \cdot 110110$$

$$\begin{array}{r} 110110 \\ \cdot\ 11100 \\ \hline 11011000 \\ +\ 110110 \\ 110110\ \ \ \\ \hline 10111101000 \end{array}$$

Javob: 10111101000.

34. A="IO.SYS – ma'lumotlarni kiritish-chiqarish sistemasini kengaytirish moduli." B="Free and Open Source Software – muloqot bepul, birlamchi kodi ochiq dasturiy ta'minot." C="FoxPro – operatsion tizimdir." Shu mulohazalar asosida quyidagi mantiqiy ifodaning natijasini toping:
$(A \vee B) \wedge (\neg B \vee C)$

Yechish:

Mulohazalarni tahlil qilamiz:
A="IO.SYS – ma'lumotlarni kiritish-chiqarish sistemasini kengaytirish moduli". – rost (1).
B="Free and Open Source Software – mutlaqo bepul, birlamchi kodi ochiq dasturiy ta'minot" – rost (1).
C="FoxPro – operatsion tizimdir". – yolg'on (0).
$(A \vee B) \wedge (\neg B \vee C)$
Qiymatlarini qo'yib chiqsak
$(1 \vee 1) \wedge (\neg 1 \vee 0)$
$1 \wedge 0 = 0$ *(yolg'on)*

Javob: yolg'on.

35. Intranet nima?

Yechish:

Intranet – bu Internetdan farqli o'laroq taskilot yoki yirik davlat muassasining shaxsiy tarmog'I hisoblanadi. Odatda Intranet texnologiyasi IP-protokollar asosida tashkil etilgan bo'lib, tashkilot ichida axborot almashinuvi uchun xizmat qiladi.
Intranet – bu tarmoq internet global tarmog'ining cheklangan turidir.

Javob: katta global tarmoqning cheklangan turi.

36. MS ACCESS 2003 dasturida "Kalit"ning vazifasi:

Yechish:

Ma'lumotlar omborida "kalit" tushunchasi mavjud. Kalit yordamida jadvallar orasidagi bog'lanish o'rnatiladi. Kalit o'rnatilgan jadval ustuni unikal bo'lishi lozim ya'ni undagi ma'lumotlar qaytarilmasligi lozim. Keyinchalik kalit o'rnatilgan maydon qiymati o'zgartirilmasligi kerak.

Javob: jadvallarni o'zaro bog'laydi.