2017-yil matematika variant yechimlari (spectrum)

II-variant

Bizning kanal : @axborotnoma

Adminsratorlar hayati : @axborotnoma_bot

Matematika yordam guruhi : @axborotnomaguruhi

Reklama xizmati : @axborotnoma_reklama

11-variant

1. $a^2 < 65$ tengsizlikni qanoatlantiruvchi eng katta natural sonning natural bo'luvchilari yig'indisini toping.

Yechish:

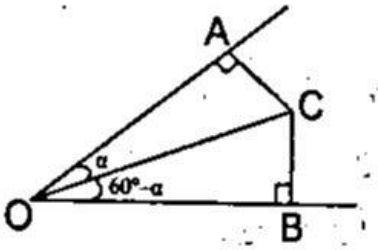
$a^2 < 65$ qisqa ko'paytirish formulasiga asosan $\sqrt{3}$.

Oraliqlar usuliga ko'ra $\sqrt{3}$.
Oraliqqa tegishli eng katta natural son 8.
8 ning natural bo'luvchilari yig'indisi
$1 + 2 + 4 + 8 = 15$.

Javob: 15.

2. 60° ga teng bo'lgan burchak ichidagi nuqtaning shu burchakning tomonlarigacha bo'lgan masofa 3 va 4 sm ga teng. Ushbu nuqtadan burchak uchigacha bo'lgan masofani toping.

Yechish:



$\angle AOB = 60°$
$CA \perp OA$,
$CB \perp OB$
$CA = 3$ sm
$CB = 4$ sm
$OC = ?$

1) ΔCAO va ΔCBO to'g'ri burchakli
$\angle AOC = \alpha$ bo'lsa, $\angle COB = 60° - \alpha$

$$2)\ \frac{\pi}{6} = \sin\alpha,\ \frac{CB}{OC} = \sin(60° - \alpha)$$

$$3)\ \frac{3}{\sin\alpha} = \frac{4}{\sin(60° - \alpha)}$$

$$3\cdot\sin(60° - \alpha) = 4\sin\alpha$$

$$3\cdot\frac{\sqrt{3}}{2}\cos\alpha - 3\cdot\frac{1}{2}\sin\alpha = 4\sin\alpha$$

$$3\sqrt{3}\cos\alpha - 3\sin\alpha = 8\sin\alpha$$

$$3\sqrt{3}\cos\alpha = 11\sin\alpha$$

$$\operatorname{ctg}\alpha = \frac{11}{3\sqrt{3}}$$

$$\sin\alpha = \frac{1}{\sqrt{1 + \operatorname{ctg}^2\alpha}} = \sqrt{\frac{27}{148}} = \frac{3\sqrt{3}}{2\sqrt{37}}$$

$$4)\ OC = \frac{CA}{\sin\alpha} = \frac{3\cdot 2\sqrt{37}}{3\sqrt{3}} = 2\sqrt{\frac{37}{3}}$$

Javob: $2\sqrt{\frac{37}{3}}$.

3. Qarang: 8-variant 9-savol (61-bet).

4. Agar $\operatorname{tg}\alpha = -2$ bo'lsa, $\frac{2\cos 2\alpha - 1}{1 - 3\cos^2\alpha}$ ning qiymatini toping.

Yechish:

$$1)\ \cos 2\alpha = \frac{1 - \operatorname{tg}^2\alpha}{1 + \operatorname{tg}^2\alpha} = \frac{1 - 4}{1 + 4} = -\frac{3}{5}$$

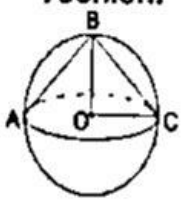
$$2)\ \cos^2\alpha = \frac{1 + \cos 2\alpha}{2} = \frac{1 - \frac{3}{5}}{2} = \frac{1}{5}$$

$$3)\ \frac{2\cos 2\alpha - 1}{1 - 3\cos^2\alpha} = \frac{2\cdot\left(-\frac{3}{5}\right) - 1}{1 - 3\cdot\frac{1}{5}} = \frac{-11}{2} = -5{,}5$$

Javob: −5,5.

5. Sharga konus ichki chizilgan. Konusning asos radiusi 60 ga teng. Shar hajmini toping.

Yechish:



$BO = H$
$H = R_{sh}$
$V_k = 60$
$V_{sh} = ?$

$OC = r$, $H = R_{sh} = r$

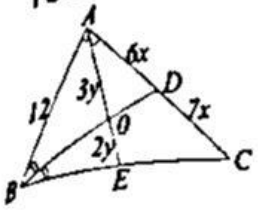
$$V_k = \frac{1}{3}\pi r^2\cdot H = \frac{1}{3}\pi r^3 = 60,\ \pi r^3 = 180.$$

$$V_{sh} = \frac{4}{3}\pi R^3 = \frac{4}{3}\pi r^3\frac{4}{3}\cdot 180 = 240.$$

Javob: 240.

6. ABC uchburchakda BD, AE bissektrisalar. O nuqtada kesishadi AB = 12, AO:OE = 3:2, AD:DC = 6:7 bo'lsa, AC ni toping.

Yechish:



$AB = 12$,
$AO:OE = 3:2$
$AD:DC = 6:7$
$AC = ?$
$AC = 13x$

Bissektrisa xossasidan $\frac{AB}{BC} = \frac{AD}{DC}$,

$BC = AB \cdot \frac{DC}{AD} = 12 \cdot \frac{7}{6} = 14.$

$BC = 14.$

$\frac{AB}{BE} = \frac{AO}{OE}$,

$BE = AB \cdot \frac{OE}{AO} = 12 \cdot \frac{2}{3} = 8,\ EC = 6$

$AB:AC = BE:EC,$

$AC = AB \cdot \frac{EC}{BE} = 12 \cdot \frac{6}{8} = 9.$

Javob: 9.

7. Qarang: 10-variant 13-savol (77-bet).

8. $0,(\overline{7a})$ davriy kasrning qiymati $\frac{7}{9}$ ga teng bo'lsa, a ning qiymatini toping (bu yerda $\overline{7a}$ ikki xonali son).

Yechish:

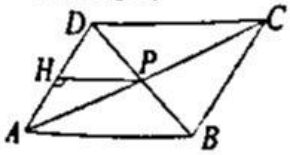
$0,(\overline{7a}) = \frac{7}{9},\ a = ?$

$\frac{7a}{99} = \frac{7}{9},\ 7a = 77,\ a = 7.$

Javob: 7.

9. ABCD rombda P nuqta diagonallari kesisish nuqtasi. $H \in |AD|$, $PH \perp AD$, $|AP| = 2|BP|$ va $|AD| = \sqrt{5}$ sm bo'lsa, $|PH|$ ni toping.

Yechish:



$ABCD$ romb
$AP = 2BP$
$AD = \sqrt{5}$
$PH \perp AD$

ΔAPD to'g'ri burchakli
$BP = DP.$

$AD^2 = AP^2 + DP^2 = (2 \cdot DP)^2 + DP^2$

$AD = DP \cdot \sqrt{5}$

$\sqrt{5} = DP \cdot \sqrt{5},$

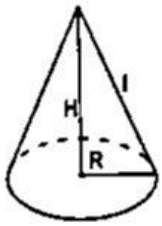
$DP = 1,\ AP = 2$

$PH = \frac{AP \cdot DP}{AD} = \frac{1 \cdot 2}{\sqrt{5}} = \frac{2\sqrt{5}}{5}.$

Javob: $\frac{2\sqrt{5}}{5}$.

10. Balandligi 6 sm, yon sirti yuzi 24π sm^2 bo'lgan konus hajmini toping.

Yechish:



$H = 6,\ S_{yon} = 24\pi$

$V = \frac{1}{3}\pi R^2 H$

$S_{yon} = \pi R l$

$l^2 = H^2 + R^2$

$24\pi = \pi R l,\ Rl = 24,$

$l = \frac{24}{R}$

$\left(\frac{24}{R}\right)^2 = 6^2 + R^2,\ 24^2 = 36R^2 + R^4,$

$R^4 + 36R^2 - 576 = 0$

$R^2 = \frac{-36 + \sqrt{36^2 - 4 \cdot (-576)}}{2} =$

$= \frac{-36 + 4\sqrt{9^2 + 4 \cdot 6^2}}{2} = -18 + 2 \cdot 15,$

$R^2 = 12$

$V = \frac{1}{3}\pi \cdot 12 \cdot 6 = 24\pi.$

Javob: 24π.

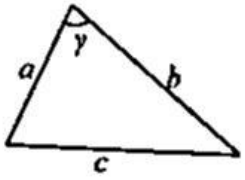
11. Qaysi jism(lar)ning simmetriya tekisliklari cheksiz sonda?
1) shar; 2) prizma; 3) konus.

Yechish:
Sharning istalgan diametral tekisligi uning simmetriya tekisligi bo'ladi, shuning uchun shar cheksiz ko'p simmetriya tekisligiga ega.

Javob: 1.

12. Uchburchakning ikki tomoni 7 va 11, yuzi $12\sqrt{10}$ bo'lsa, uchinchi tomonini toping.

Yechish:



$a = 7,\ b = 11,$
$S = 12\sqrt{10},\ c = ?$
$S = \frac{a \cdot b}{2} \cdot \sin\gamma$

$12\sqrt{10} = \frac{7 \cdot 11}{2} \cdot \sin\gamma,$

$\sin\gamma = \frac{24\sqrt{10}}{77}$

$\cos\gamma = \pm\sqrt{1 - \left(\frac{24\sqrt{10}}{77}\right)^2} = \pm\frac{13}{77}$

$c^2 = a^2 + b^2 - 2ab\cos\gamma$

$\cos\gamma = \frac{13}{77}$

$c = \sqrt{7^2 + 11^2 - 2 \cdot 7 \cdot 11 \cdot \frac{13}{77}} = \sqrt{144} = 12$

$\cos\gamma = -\frac{13}{77}$

$c = \sqrt{7^2 + 11^2 - 2 \cdot 7 \cdot 11 \cdot \left(-\frac{13}{77}\right)} = \sqrt{196} = 14.$

Javob: 12 yoki 14.

13. $b_n = 4n - 2$ formula bilan berilgan ketma-ketlikning birinchi 40 ta hadlarining yig'indisini toping.

Yechish:

$b_n = 4n - 2$
$S_{40} = ?$

1) $S_{40} = \frac{b_1 + b_{40}}{2} \cdot 40 = 20 \cdot (b_1 + b_{40})$

2) $b_1 = 4 - 2 = 2.$
$b_{40} = 4 \cdot 40 - 2 = 158$

3) $S_{40} = \frac{2 + 158}{2} \cdot 40 = 20 \cdot 160 = 3200.$

Javob: 3200.

14. Agar $\frac{3^x + 6^x + 9^x}{5^x + 10^x + 15^x} = \frac{50}{18}$ bo'lsa, x ni toping.

Yechish:

$\frac{3^x + 6^x + 9^x}{5^x + 10^x + 15^x} = \frac{50}{18}$

$\frac{3^x(1 + 2^x + 3^x)}{5^x(1 + 2^x + 3^x)} = \frac{25}{9}$

$\left(\frac{3}{5}\right)^x = \left(\frac{3}{5}\right)^{-2},\ x = -2.$

Javob: –2.

15. Qarang: **5-variant 17-savol (40-bet).**

16. Eng katta butun yechimini toping:

$\frac{9x + 2}{10} - \frac{10x - 2}{9} > 2.$

Yechish:

$\frac{9x + 2}{10} - \frac{10x - 2}{9} > 2,$

$81x + 18 - 100x + 20 > 180$

$-19x > 142$

$x < -\frac{142}{19} = -7\frac{9}{19}$

$x < -7\frac{9}{19}$ *eng katta butun yechimi* –8.

Javob: –8.

17. $f(x)$ funksiya berilgan (a, b) intervalda differensiallanuvchi bo'lsin. $(f(x))^4$ funksiyaning (a, b) intervalda hosilasini toping.

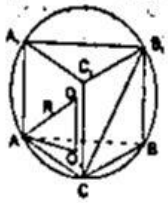
Yechish:

$f(x)$ funksiya (a; b) oraliqda differensialanuvchi bo'lsa, u holda $(f(x))^4$ funksiyaning (a; b) oraliqda hosilasi $((f(x))^4)' = 4 \cdot (f(x))^3 \cdot f'(x)$ bo'ladi.

Javob: $4(f(x))^3 \cdot f'(x)$.

18. Radiusi 14 sm bo'lgan sharga yon yoq diagonali 26 sm bo'lgan muntazam uchburchakli prizma ichki chizilgan. Prizma asosi tomonini toping.

Yechish:



$ABCA_1B_1C_1$ muntazam uchburchakli prizma.
$AA_1 = H$
$AO = R$ – shar radiusi

$OO_1 = \frac{H}{2}$, $AB = a$

$BC = D$ – yon yoq diagonali

1) ΔAO_1O to'g'ri burchakli.

$AO^2 = AO_1^2 + OO_1^2$

$R^2 = \left(\frac{H}{2}\right)^2 + \left(\frac{a}{\sqrt{3}}\right)^2$

2) ΔB_1BC to'g'ri burchfkli

$B_1C^2 = BB_1^2 + BC^2$

$D^2 = H^2 + a^2$

3) $\begin{cases} 14^2 = \frac{H^2}{4} + \frac{a^2}{3} \\ 26^2 = H^2 + a^2 \end{cases} \Rightarrow \begin{cases} 14^2 \cdot 12 = 3H^2 + 4a^2 \\ H^2 = 26^2 - a^2 \end{cases}$

$14^2 \cdot 12 = 3 \cdot 26^2 - 3a^2 + 4a^2$

$a^2 = 14^2 \cdot 12 - 3 \cdot 26^2 = 12(14^2 - 13^2) = 12 \cdot 27$

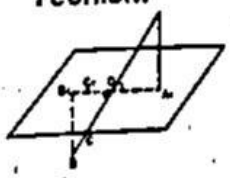
$a = 18$.

Javob: 18.

19. Tekislikni kesib o'tuvchi kesmaning uchlari tekislikdan 4 va 6 masofada tursa, berilgan kesma o'rtasidan tekislikkacha bo'lgan masofani toping.

Berilgan:
AB – kesma
$AA_1 = 4$
$BB_1 = 6$
$CC_1 = ?$

Yechish:



C nuqta AB kesma o'rtasi.

$AO + OB = AB$, $AC = CB$

$\sin\alpha = \frac{AA_1}{AO}$, $\sin\alpha = \frac{BB_1}{OB}$

$\frac{AA_1}{AO} = \frac{BB_1}{OB}$, $\frac{4}{6} = \frac{AO}{OB}$

$AO = 2x$, $OB = 3x$, $AB = 5x$

$AC = BC = 2{,}5x$, $OC = 0{,}5x$

$\frac{4}{CC_1} = \frac{2x}{0{,}5x}$; $CC_1 = 1$.

Javob: 1.

20. Kvadratlarining ayirmasi 799 ga teng bo'lgan barcha natural sonlarni toping.

Yechish:

$a^2 - b^2 = 799$ $a, b \in N$

1) $(a - b)(a + b) = 799$

2) $799 = 17 \cdot 47$ $799 = 1 \cdot 799$

$\begin{cases} a - b = 17 \\ a + b = 47 \end{cases} \Rightarrow \begin{matrix} a = 32 \\ b = 15 \end{matrix}$ $(32;15)$

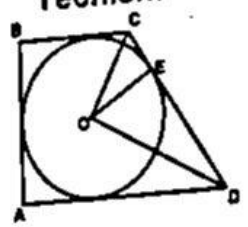
$\begin{cases} a - b = 1 \\ a + b = 799 \end{cases} \Rightarrow \begin{matrix} a = 400 \\ b = 399 \end{matrix}$ $(400;399)$

Javob: 32 va 15; 400 va 399.

21. AD va BC asosli to'g'ri burchakli ABCD trapetsiyaga aylana ichki chizilgan. Agar aylana markazi trapetsiyaning C va D uchlaridan mos ravishda 2 va 6 ga teng masofada bo'lsa, trapetsiya yuzini toping.

Berilgan:
$ABCD$ – to'g'ri burchakli trapetsiya
$\angle A = \angle B = 90°$
$CO = 2$, $OD = 6$
$S_t = ?$

Yechish:



ΔCOD to'g'ri burchakli.

$OE \perp CD$

$CD^2 = OC^2 + OD^2 = 2^2 + 6^2 = 40$

$CD = 2\sqrt{10}$

$OE = \frac{OC \cdot OD}{CD} = \frac{2 \cdot 6}{2\sqrt{10}} = \frac{6}{\sqrt{10}}$

$AB = 2OE = 2 \cdot \frac{6}{\sqrt{10}} = \frac{12}{\sqrt{10}}$

$S = \frac{AD + BC}{2} \cdot AB$

$AD + BC = AB + CD = \frac{12}{\sqrt{10}} + 2\sqrt{10} = \frac{32}{\sqrt{10}}$

$S = \frac{32}{2\sqrt{10}} \cdot \frac{12}{\sqrt{10}} = \frac{192}{10} = 19{,}2.$

Javob: 19,2.

22. **Qarang: 10-variant 21-savol (79-bet).**

23. a ning qanday qiymatida $x^2 + x - a^2 - 2 = 0$ tenglamaning ildizlaridan biri ikkinchisidan 5 ga kichik bo'ladi?

Yechish:

$x^2 + x - a^2 - 2 = 0$

1) Viyet teoremasidan $\begin{cases} x_1 + x_2 = -1 \\ x_1 \cdot x_2 = -a^2 - 2 \end{cases}$

2) $x_1 - x_2 = 5$

$$\begin{cases} x_1 + x_2 = -1 \\ x_1 - x_2 = 5 \end{cases} \Rightarrow \begin{cases} x_1 = 2 \\ x_2 = -3 \end{cases}$$

3) $x_1 \cdot x_2 = -a^2 - 2$

$2 \cdot (-3) = -a^2 - 2$

$a^2 = 4$, $a = \pm 2$.

Javob: a = ±2.

24. Ko'phadni ko'paytuvchilarga ajrating: $f(x) = x^6 + 26x^3 - 27$.

Yechish:

$f(x) = x^6 + 26x^3 - 27$.

1) $x^3 = a$

$a^2 + 26a - 27 = (a + 27)(a - 1)$

2) $(x^3 + 27)(x^3 - 1) = (x^3 + 3^3)(x^3 - 1^3) =$

$= (x + 3) \cdot (x^2 - 3x + 9) \cdot (x - 1)(x^2 + x + 1) =$

$= (x + 3)(x - 1)(x^2 - 3x + 9) \cdot (x^2 + x + 1)$.

Javob: $(x + 3) \cdot (x - 1) \cdot (x^2 - 3x + 9) \cdot (x^2 + x + 1)$.

25. Dastlabki 10 ta tub son ketma-ket bir qatorga yozilib, 6 ta raqam shunday o'chirildiki, natijada eng katta son hosil bo'ldi. Shu sonning yettinchi raqamini toping.

Yechish:

Dastlabki 10 ta tub son 2, 3, 5, 7, 11, 13, 17, 19, 23, 29. 6 ta raqamni o'chiramiz:

~~2, 3, 5, 7, 11, 1~~3, 17, 19, 23, 29.

Eng katta butun son 7317192329.

Shu sonning yettinchi raqami 2.

Javob: 2.

26. Hisoblang $\int_0^{\pi} \sqrt{1 + \sin 2x}\, dx$.

Yechish:

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

$\sin 2x = 2\sin x \cdot \cos x$

$$\int_0^{\pi} \sqrt{1 + \sin 2x}\, dx =$$

$$= \int_0^{\pi} \sqrt{\sin^2 x + \cos^2 x + 2\sin x \cos x}\, dx =$$

$$= \int_0^{\pi} \sqrt{(\sin x + \cos x)^2}\, dx =$$

$$= \int_0^{\pi} |\sin x + \cos x|\, dx = \int_0^{\frac{3\pi}{4}} (\sin x + \cos x)\, dx -$$

$$- \int_{\frac{3\pi}{4}}^{\pi} (\sin x + \cos x)\, dx = (-\cos x + \sin x)\Big|_0^{\frac{3\pi}{4}} -$$

$$- (-\cos x + \sin x)\Big|_{\frac{3\pi}{4}}^{\pi} = -\cos\frac{3\pi}{4} + \sin\frac{3\pi}{4} +$$

$+ \cos 0 - \sin 0 + \cos\pi - \sin\pi -$

$$- \cos\frac{3\pi}{4} + \sin\frac{3\pi}{4} = \frac{\sqrt{2}}{2} + \frac{\sqrt{2}}{2} +$$

$$+ 1 - 0 - 1 - 0 + \frac{\sqrt{2}}{2} + \frac{\sqrt{2}}{2} = 2\sqrt{2}.$$

Javob: $2\sqrt{2}$.

27. Qandaydir a, b, c uchun $\cos 4x = a\cos^4 x + b\cos^2 x + c$ ayniyat bajarilsa, b ni toping.

Yechish:

$\cos 4x = a\cos^4 x + b\cos^2 x + c$ *ayniyat.*

$b = ?$

1) $\cos 4x = 2\cos^2 2x - 1 = 2(2\cos^2 x - 1)^2 - 1 =$

$= 8\cos^4 x - 8\cos^2 x + 2 - 1 =$

$= 8\cos^4 x - 8\cos^2 x + 1$

2) $8\cos^4 x - 8\cos^2 x + 1 = a\cos^4 x + b\cos^2 x + c$

$a = 8$, $b = -8$, $c = 1$.

Javob: –8.

28. $y = -8(4x^2 - 4x + 3)^{-1}$ funksiyaning eng kichik qiymatini toping.

Yechish:

$$y = \frac{-8}{4x^2 - 4x + 3} = \frac{-8}{4x^2 - 4x + 1 + 2} =$$

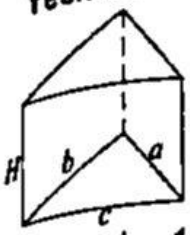
$$= \frac{-8}{(2x-1)^2 + 2}$$

$2x - 1 = 0$ *bo'lganda funksiya o'zining eng kichik qiymatida erishadi. Demak* $x = \frac{1}{2}$ *bo'lganda* $y = -\frac{8}{2} = -4$, $y_{min} = -4$.

Javob: –4.

29. Uchburchakli to'g'ri prizma asosining yuzi 4 sm^2, yon yoqlari yuzalari 9 sm^2, 10 sm^2, 17 sm^2. Prizma hajmini toping.

Yechish:



$S_{asos} = 4$

$S_1 = a \cdot H = 9$

$S_2 = b \cdot H = 10$

$S_3 = c \cdot H = 17$

$V = S_{asos} \cdot H$

$\frac{a}{b} = \frac{9}{10}, \frac{b}{c} = \frac{10}{17}, \frac{a}{c} = \frac{9}{17}$

$a = 9x, b = 10x, c = 17x$

$p = \frac{a+b+c}{2} = \frac{9x+10x+17x}{2} = 18x$

$4 = \sqrt{18x \cdot (18x-9x)(18x-10x)(18x-17x)}$

$16 = 18x \cdot 9x \cdot 8x \cdot x$

$81x^4 = 1$

$x^4 = \frac{1}{81}, x = \frac{1}{3}$

$S_1 = a \cdot H = 9$

$9x \cdot H = 9$

$H = \frac{1}{x} = 3$

$V = 4 \cdot 3 = 12.$

Javob: 12 sm^3.

30. $\bar{a}$, $\bar{b}$ va $\bar{c}$ birlik vektorlar $\bar{a}+\bar{b}+\bar{c}=0$ shartni qanoatlantiradi. $\bar{a} \cdot \bar{b} + \bar{b} \cdot \bar{c} + \bar{c} \cdot \bar{a}$ ni hisoblang.

Yechish:

$|\bar{a}| = |\bar{b}| = |\bar{c}| = 1, \bar{a}+\bar{b}+\bar{c}=0$

$\bar{a} \cdot \bar{b} + \bar{b} \cdot \bar{c} + \bar{c} \cdot \bar{a} = ?$

1) $(\bar{a}+\bar{b}+\bar{c})^2 = \bar{a}^2+\bar{b}^2+\bar{c}^2 +$

$+ 2(\bar{a} \cdot \bar{b} + \bar{b} \cdot \bar{c} + \bar{c} \cdot \bar{a}) = 0$

2) $|\bar{a}|^2 = |\bar{b}|^2 = |\bar{c}|^2 = 1$

3) $1 + 1 + 1 + 2(\bar{a} \cdot \bar{b} + \bar{b} \cdot \bar{c} + \bar{c} \cdot \bar{a}) = 0$

$\bar{a} \cdot \bar{b} + \bar{b} \cdot \bar{c} + \bar{c} \cdot \bar{a} = -1{,}5.$

Javob: –1,5.

31. **Qarang: 10-variant 33-savol (81-bet).**

32. Mikroprosessorlar qachon ilk bor yaratilgan?

Yechish:

Birinchi mikroprotsessor Intel korporatsiyasining 4-bitli Intel-4004 mikroprotsessori 1971 yilning 15-noyabrida ishlab chiqarilgan. Ushbu mikrosxema dunyodagi eng birinchi ommabop bir kristalli mikroprotsessor hisoblanadi.

Javob: 1971.

33. 5 lik sanoq sistemasida 3+4 nechaga teng?

Yechish:

1-usul: 5 lik sanoq sistemasida qo'shish jadvali.

+	0	1	2	3	4
0	0	1	2	3	4
1	1	2	3	4	10
2	2	3	4	10	11
3	3	4	10	11	12
4	4	10	11	12	13

2-usul: Avval qo'shiluvchi sonlarni 10-lik sanoq sistemaga o'tkazib, ularni qo'shib, keyin 5 lik sanoq sistemaga o'tkazamiz.

$4_{(5)} \rightarrow 4_{(10)}$

$3_{(5)} \rightarrow 3_{(10)}$

$3 + 4 = 7_{10}$

$7_{10} \rightarrow x_5$

7 | 5
5 | 1
2

$7_{10} = 12_{(5)}$.

Javob: 12.

34. Qaysi qatorda elektron jadval katagi to'g'ri belgilangan?

Yechish:

Yacheyka nomida avval ustun nomi lotin alifbosi (A, B, C, ..., AA, AB, AC, ...) so'ng satr raqami ko'rsatiladi.
Masalan D4, AZ15. D23 – deganda D-chi ustun va 23-chi satr kesishmasida joylashgan yacheyka manzili tushuniladi.

Javob: D23.

35. MS ACCeSS dasturida Memo maydoni qanday ma'lumotlarni saqlaydi?

Yechish:

MS Access dasturining memo tur maydonida matnli ma'lumotlarni saqlash uchun mo'ljallangan. Bu maydonga 255 dan yuqori belgidan iborat matnlarni saqlash mumkin. Chunki Accessning "текстовый" tur maydonida faqat 255 tagacha simvolli matnlarni saqlash mumkin.
Memo maydonining afzalliklari, unda katta hajmdagi (65535 tagacha simvoldan iborat) matnlarni saqlash mumkin.

Javob: 256 tadan 65535 tagacha belgidan iborat bo'lgan matnli ma'lumotlarni saqlaydi.

36. MS Excel 2003 dasturida «=МОПРЕД» funksiyasi bu:

Yechish:

MS Excel dasturida МОПРЕД funksiyasi ko'rsatigan diapazondagi matritsa determinantini hisoblaydi.
=МОПРЕД(massiv).
Massiv sonlardan iborat kvadrat massiv bo'lishi lozim. Kvadrat deganda massivda ustunlar soni satrlar soniga teng bo'lishi kerak.
Masalan:

$A=\begin{pmatrix} 2 & 3 \\ 4 & 5 \end{pmatrix}$ *matritsa berilgan.*

Bu matritsa 2 ta ustun va 2 ta satrdan iborat. Demak, kvadrat matritsa.
Bu matritsaning determinantini matematik yo'l bilan hisoblaymiz.
$def(A) = 2 \cdot 5 - 3 \cdot 4 = 10 - 12 = -2$.
Demak, A matritsa determinanti –2 ga teng.
Bu misolni MS Excelda yechish uchun A1 yacheykaga 2 ni, B1 yacheykaga 3 ni, A2 yacheykaga 4 ni, B2 ga 5 ni kiritib, A3 yacheykaga quyidagi formulani kiritamiz: =МОПРЕД(A1:B2).
Natijada A3 yacheykada –2 hosil bo'ladi.

Javob: ko'rsatilgan diapazondagi determinantning qiymati.