

$$N1) 0,414285 - 1,571428$$

Вариант 8 (1)

$$0,414285$$

$$1000000 = 414285, 414285 \dots$$

$$999\ 999 = 414\ 285$$

$$a = \frac{414\ 285}{999\ 99}$$

$$+ 0,571428$$

$$b = 0,571428$$

$$10\ 00\ 000 b = 571428,571428$$

$$999\ 999 = 571\ 428$$

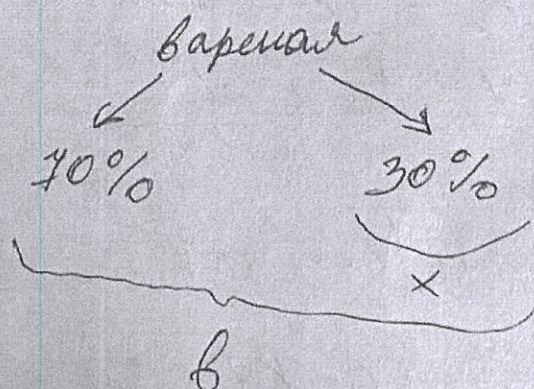
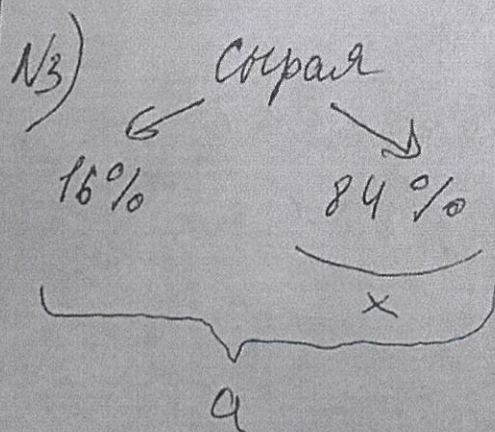
$$b = \frac{571428}{99999}$$

$$\frac{414285}{999\ 99} - 1 \frac{571428}{99999} = \frac{414285}{99999} - \frac{641428}{999\ 99} =$$

$$= \frac{42858}{999\ 99} = \frac{4462}{11111}$$

$$\text{Ответ: } \frac{4462}{11111}$$

05



$$a = \frac{100 \cdot x}{84}$$

$$b = \frac{100 \cdot x}{30}$$

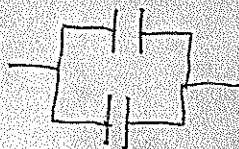
$$\frac{a}{b} = \frac{84}{30} = 2,8$$

105

N6)

Вариант 8(2)

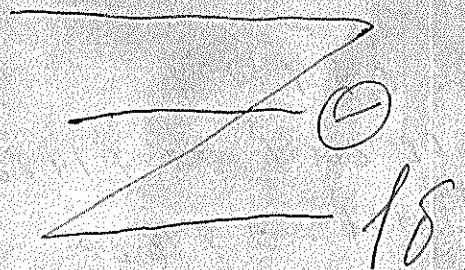
$$-| | \quad \cos \delta_0 = \frac{c}{2} ; \frac{1}{\cos \delta} = \frac{a}{c} + \frac{1}{c a}$$



$$\cos \delta_0 = 2c \quad \cos \delta = \frac{c}{a} + c a$$

$$1 - \frac{ca}{a^2 + 1} \cdot \frac{2}{c} = \frac{2a}{a^2 + 1}$$

$$2 - \frac{c \left(\frac{1}{a} + a \right)}{2c} = \frac{\frac{1}{a} + a}{2}$$



7) P_1, N_1, P_2, N_2 - давления и кол-во молекул в болевом и малом резервуаре после тир.

$$T = 425 \text{ K}$$

$$P_1 - P_2 = P_0 = 800 \text{ мм рт.ст.}$$

$$N = N_1 + N_2 = \frac{PV}{KT_0}$$

$$P = 760 \text{ мм рт.ст.}$$

$$T_0 = 285 \text{ K}$$

$$(P_0 + P_2)V_1 = d_1 KT$$

$$P_2 V_2 = d_2 KT = (d - d_1) KT = d KT$$

$$P_2 = \frac{d KT - P_0 V_1}{V_1 + V_2} = \frac{V_1}{V_1 + V_2} \left[P \frac{T}{T_0} - P_0 \right] \text{ мм.ст.} = \oplus$$

$$= \frac{30 \times 10^{-3}}{30 \times 10^{-3} + 10 \times 10^{-3}} \left[\frac{800 \cdot 425}{285} - 800 \right] = 397 \text{ мм.ст.}$$

75.

$$2) V_{JCEF} = V_{JB}$$

$$3) P_V = V_{AT}$$

$$4) J_{CE} = I_G$$

$$5) J_{CE} = I_{BG}$$

$$6) J_{CE} = I_{BG}$$

19) t - время крота

$$S = 2MR$$

$$T = \frac{2\pi}{\omega}$$

$$N = \frac{R}{\omega}$$

$$C = \frac{W}{t}$$

$$t\omega = \frac{2\pi}{\omega} \cdot \frac{R}{N}$$

$$C = \frac{W^2 \mu}{2\pi R}$$

± 10 .

$$2) (\cos a)^{\cos a} + (\sin b)^{\sin b} > \cos a \cdot \sin b$$

$$A+B > 2\sqrt{AB}$$

$$\geq 2\sqrt{(\cos a)^{\cos a} \cdot (\sin b)^{\sin b}}$$

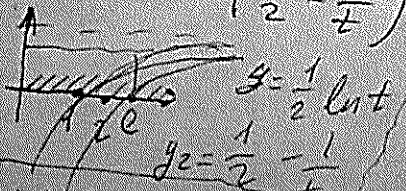
2) докажем, что $S > \cos a \sin b$

$$S = 2\sqrt{(\cos a)^{\cos a} \cdot (\sin b)^{\sin b}} = 2(\cos a)^{\frac{\cos a}{2}}$$

$$\cdot (\sin b)^{\frac{\sin b}{2}}$$

$$y(t) = \frac{t}{t} = \frac{t}{t} - 1 = e^{\ln(t \frac{t}{t} - 1)} = e^{(\frac{t}{t} - 1) \ln(t)}$$

$$y' = e^{(\frac{t}{t} - 1) \ln t} \cdot \left[\frac{1}{2} \ln t + \left(\frac{t}{t} - 1 \right) \cdot \frac{1}{t} \right] = e^{(\frac{t}{t} - 1) \ln t} \cdot \left[\frac{1}{2} \ln t + \left(\frac{1}{2} - \frac{1}{t} \right) \right]$$



при $0 < t < 1$

$$y' < 0, \text{ так } y_1 < 0, y_2 < 0$$

мы имеем $y(t) > 0$ при $0 < t < 1$

$$y(x) = (\cos x)^{\frac{\cos x}{2}} \cdot (\sin x)^{\frac{\sin x}{2}}$$

$$\Rightarrow \frac{(\cos x)^{\frac{\cos x}{2}}}{\cos x} > 1 \Rightarrow (\cos x)^{\frac{\cos x}{2}} > \cos x \Rightarrow 2 \cos x \frac{\cos x}{2} \sin x \frac{\sin x}{2} > \cos x \cos x$$

N8)

$$P = 6x + 4y - 2z$$

$$P = -6x + 6y + 12z$$

ищем $x = 0$

$$P_{zy} = 10y + 10z$$

$$V = 4e_y + 4e_z$$

$$m = 2, 5$$

$$\text{Ответ: } V = 4e_y + 4e_z$$

Вариант 8 (3)

(X)

10

N10) L — норм. век. вып.

$$\sin \alpha = 1$$

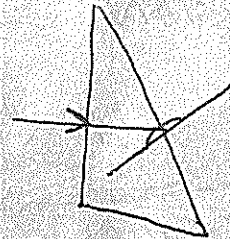
$$\sin \alpha = \frac{1}{1+L}$$

$$\sin \alpha = \frac{1}{1+L}$$

$$\frac{1}{1 + \frac{6,6 \cdot 10^{-4}}{600 \cdot 10^{-9}}} = \frac{1}{1 + \frac{11}{10}} = \frac{10}{21} \text{ — больше значения}$$

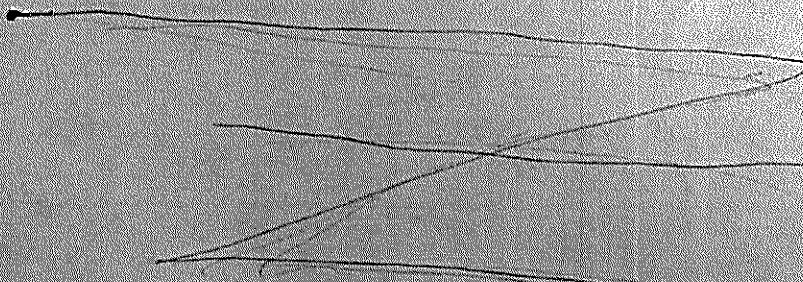
$$\sin \alpha = \frac{1}{1 + \frac{450 \cdot 10^{-4}}{600 \cdot 10^{-9}}} = \frac{1}{126}$$

меньше значения
не сработало



(1)

0



Решение P (15)

$$4.) \quad \alpha = 2020 \quad \beta = 2015$$

$$n + \alpha = k^2 \quad n + \beta = m^2 \quad n + \alpha\beta = b^2$$

$$(n + \alpha) - (n + \beta) = k^2 - m^2 = 2020 - 2015 = 5 \Rightarrow$$

$$\Rightarrow (k - m)(k + m) = 5$$

$$\begin{cases} k - m = 1 \\ k + m = 5 \end{cases}$$

$$\begin{cases} k = 3 \\ m = 2 \end{cases}$$

$$\begin{cases} k - m = -1 \\ k + m = -5 \end{cases}$$

$$\begin{cases} k - m = 5 \\ k + m = 1 \end{cases}$$

$$\begin{cases} k - m = -5 \\ k + m = -1 \end{cases}$$

рассм. на предмете n и k и m и b и α и β

$$\Rightarrow n_1 = 3^2 - 2020 = -2011$$

$$n_2 = 2^2 - 2015 = -2011$$

$$\begin{aligned} n + \alpha\beta &= -2011 + 2020 \cdot 2015 = -2020 + 9 + 2020 \cdot 2015 = \\ &= 2020(2015 - 1) + 9 = 2020 \cdot 2014 + 9 = t(t + 6) + 9 = \\ &= (t + 3)^2 - \text{полн. кв.} \end{aligned}$$

$$\text{Ответ: } n = -2011$$

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