

HARBY 2018 - matematika

yechimlar 5-qism

Yarumiy.

150)  $\cos^2 x + \tan^2 x \cdot \cos^2 x =$

$$= \cos^2 x + \frac{\sin^2 x}{\cos^2 x} \cdot \cos^2 x = 1$$

151)  $\left\{ \frac{\lg 200}{\lg 50} \right\} + \left\{ \log_5 12.5 \right\} =$

$$= \left\{ \frac{\lg 2 + \lg 20}{\lg 5 + \lg 10} \right\} + \left\{ 2 - \log_5 2 \right\} =$$

$$= \left\{ \frac{\lg 2}{\lg 5} \right\} + \left\{ 2 - \log_5 2 \right\} =$$

$$= \left\{ \log_5 2 \right\} + \left\{ 2 - \log_5 2 \right\} =$$

$$= \log_5 2 - [\log_5 2] + 2 - \log_5 2 - [2 - \log_5 2]$$

$$= -0 + 2 - 1 = 1$$

152)  $\sqrt[n+1]{\sqrt[n]{81}} = \sqrt[4]{9}$

$$n+1 \sqrt[3]{\frac{4}{n-1}} = 3 \frac{1}{2}$$

$$\frac{4}{n^2-1} = \frac{1}{2}$$

$$n^2 - 1 = 8$$

$$n^2 = 9$$

$$n^2 + 1 = 10$$

@arborofnana

253)

$$\frac{1}{a} + \frac{1}{b+c} \left( 1 + \frac{b^2+c^2-a^2}{2bc} \right) : \frac{(a+b+c)^2}{bc}$$

$$= \frac{a+b+c}{b+c-a} \cdot \frac{(b+c)^2 - a^2}{2bc} \cdot \frac{bc}{(a+b+c)^2} = \frac{1}{2}$$

54)

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

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

$$\frac{1-x}{x-1} = \frac{1}{2x-1}$$

$$\frac{1}{2x-1} = -1$$

$$1 = 1 - 2x$$

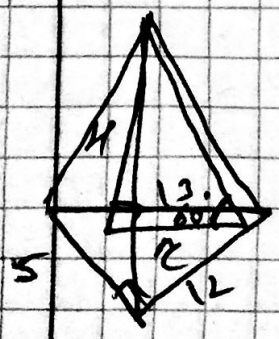
Jawab: 1 (ta)

$$\boxed{x=0}$$

256)

$$\frac{11(11-3)}{2} = \frac{11 \cdot 8}{2} = 44 \text{ (ta)}$$

257)



$$\angle = 60^\circ$$

$$r = \frac{a+b-c}{2} = \frac{17-13}{2} = 2$$

$$\text{tg } \theta = \frac{h}{r} \quad h = \text{tg } 60^\circ \cdot r = 2\sqrt{3}$$

$$V = \frac{1}{3} S_p \cdot h = \frac{1}{3} \cdot \frac{12 \cdot 5}{2} \cdot 2\sqrt{3} = 20\sqrt{3}$$

@axboronmagnum

K58 | A(1:0)      B(3:0)

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2} = \sqrt{(3-1)^2 + 0} = \sqrt{2}$$

$$\text{Y: } ab + a + b = 11 \Rightarrow (a + 1)(b + 1) = 12 \quad (1)$$

$$bc + b + c = 5 \Rightarrow (b + 1)(c + 1) = 6 \quad (2)$$

$$ca + c + a = 1 \Rightarrow (c + 1)(a + 1) = 2 \quad (3)$$

(1), (2) va (3) tengliklarni ko'paytirib va shartdan  $a > -1, b > -1, c > -1$  ekanligini hisobga olib,  $(a + 1)(b + 1)(c + 1) = 12$  ga teng bo'ladi.

Demak, so'ralgan ifodani qiymatini uni ko'paytuvchilarga ajratgan holda topamiz:

$$abc + ab + bc + ca + a + b + c =$$

$$(a + 1)(b + 1)(c + 1) - 1 = 12 - 1 = 11.$$

**Javob: C.      @Riyoziyot**

259)  $A(3:0)$   $B(-1:2)$   $y = x + 2$   
 $y \rightarrow x$  dan 2 ta 10sp demak,  
 $C(3:5)$  Javob!  $(3:5)$

260) olma, nok, mandarin  
 $P_3 = 3! = 1 \cdot 2 \cdot 1 = 6$

261)  $a = 2n$   $2ga$  korrali

262)  $a > 0$   $b > 0$   $c < 0$   $b^2 - 4ac > 0$

$$ax^4 + bx^2 + c = 0 \quad a = 1 \quad b = 2 \quad c = -3$$

$$x^4 + 2x^2 - 3 = 0$$

$$(x-1)(x+1)(x^2+3) = 0$$

$$\underline{x = 1} \quad \underline{x = -1}$$

Javob: 2 ta '10li' ta

263)  $a = 1 \cdot 2 \cdot 3 \cdot$

263)  $a = 1 \cdot 2 + 2 \cdot 3 + 3 \cdot 4 \dots + 40 \cdot 41$

$b = 5 \cdot 4 + 10 \cdot 6 + 15 \cdot 8 \dots 200 \cdot 82$

$$\frac{a}{b} = \frac{1 \cdot 2 + 2 \cdot 3 \dots + 40 \cdot 41}{10(1 \cdot 2 + 2 \cdot 3 \dots + 40 \cdot 41)} = \frac{1}{10}$$

264)  $a, b, c > 0.$

$$x = 3a + 2 = 5b + 4 = 7c + 6$$

↑  $x - ?$

Единок (3:5:7).  $[999; \text{Единок (3:5:7)}] - 1$

$$= 105 \cdot 9 - 1 = 944.$$

Мишлар сз бечимини  
топади.

ⓐ ахборотнома

ⓑ ахборотномагунҳи.