

$$1) \sin 47 \sin 73 = a$$

$$\frac{\sin 13}{\sin 39} = ?$$

$$2) 1 + \frac{2}{5} + \frac{3}{25} + \frac{4}{125} + \dots = ?$$

$$6 + \frac{1}{5} + \frac{1}{25} = ?$$

3) uchburchakning uchlaridan tekislikkacha bo'lgan masofa 2,25; 3,75; 9 uchburchakning o'gizlik markazidan tekislikkacha bo'lgan masofani toping.

4) uchburchak yuzi 1 ga teng



bo'yalgan soha yuzi

5) reksia avtomobili $85\frac{5}{8}$ tezlik bilan 1 soat 36 min yursa qancha masofa bosadi

6) $x^2 + ax + 4 = 0$ $x^2 + 4x + a = 0$ tenglamalar ning ixtisloslari umumiy bo'lsa $a = ?$

7) $a + b + c = 0$
 $a \cdot b \cdot c \neq 0$
 $\frac{a}{|a|} + \frac{b}{|b|} + \frac{c}{|c|} + \frac{ab}{|a \cdot b|} + \frac{a \cdot c}{|a \cdot c|} + \frac{bc}{|b \cdot c|}$
 nechta qiymatga ega

8) 15, 12, 20.

$$9) 1 + \frac{2}{5} + \frac{3}{25} + \frac{4}{125} + \dots$$

$$10) \sqrt{\frac{\sin 4}{x^2 - 4x - 12}} + a.$$

aniqlanish sohasiga nechta butun son kiradi.

$$\frac{2000}{1001} = 1, \dots, a$$

2017-chisi 3 b'olishi mumkinmi



$$① \quad 369 : (259 - (45 + 3x) - 16) = 3$$

$$259 - (45 + 3x) - 16 = 369 : 3$$

$$259 - (45 + 3x) - 16 = 123$$

$$259 - 123 = 45 + 3x + 16$$

$$136 = 61 + 3x$$

$$75 = 3x$$

$$x = 25$$

$$②) a) x^2 - 6x + 9 \geq 0 \quad b) x^2 - 6x + 9 \leq 0 \quad c) x^2 - 6x + 9 < 0$$

$$d) x^2 - 6x + 9 > 0$$

$$1) x \in \mathbb{R}$$

$$3) x \in [0; +\infty)$$

$$2) x \in \{3\}$$

$$4) \emptyset$$

masini tanlang.

$$3) a) \sqrt{-b^2} = b$$

$$b) \sqrt{-b^2} = -b$$

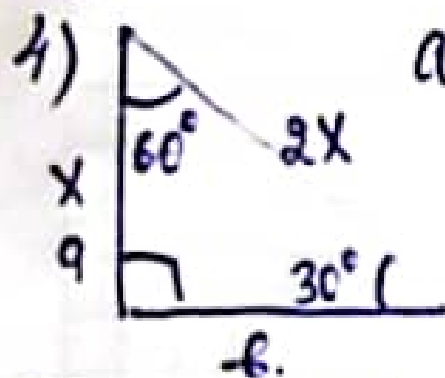
c)

$$1) b \geq 0$$

$$2) \text{aniqlab bilmaydi}$$

$$3) b \leq 0$$

$$4) b = 0$$



$$a + b = 24$$

$$a = x \quad c = 2x$$

$$x + 2x = 24$$

$$3x = 24$$

$$x = 8$$

$$c = 2 \cdot 8 = 16$$

$$⑤ \quad 9 \cdot 27^{-1} \cdot (3^2)^3 : \left(\frac{1}{3^2} \cdot \frac{1}{81} \right) = 9 \cdot \frac{1}{27} \cdot 3^6 : \left(\frac{1}{3^2} \cdot \frac{1}{81} \right)$$

$$= \frac{1}{3} \cdot 3^6 : \left(\frac{1}{3^2} \cdot 3^4 \right) = 3^5 : 3^2 = 3^3$$



_____ | _____ | _____

$$6) \frac{7}{\sqrt{2}} - \frac{2}{\sqrt{7}-\sqrt{5}} + \frac{2}{\sqrt{5}+\sqrt{3}} = \frac{7\sqrt{2}}{7} - \frac{2(\sqrt{2}+\sqrt{5})}{2} + \frac{2(\sqrt{5}-\sqrt{3})}{2} = \sqrt{2} - \sqrt{2} - \sqrt{5} + \sqrt{5} - \sqrt{3} = \boxed{-\sqrt{3}}$$

$$7) \begin{matrix} V_1 = 15 \\ V_2 = 10 \end{matrix} \xrightarrow{15 \text{ km/s}} \xleftarrow{10 \text{ km/s}} V_0 = ?$$

$$V_{\text{chetq}} = \frac{15+10}{2} = \boxed{12,5} \text{ km/sat.}$$

$$8) \begin{matrix} P_1 = 0,01(m^3) \\ P_2 = 0,02(m^3) \\ P_3 = 0,04(m^3) \end{matrix}$$

$$P_{10} = ?$$

$$Q_n = Q_1 + (n-1) \cdot d$$

$$b_n = b_1 \cdot q^{n-1}$$

$$q = \frac{0,04}{0,02} = 2$$

$$Q_{10} = b_{10} = 0,01 \cdot 2^{10-1} = 5,12$$

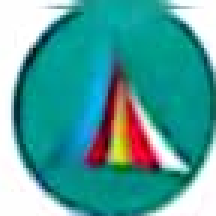
$$P_{10} - \text{dava} = 5,12 (m^3)$$

$$9) f(x+1) + f(x-1) = 4x - 6$$

$f(3)$ daqi qiymatini toping.

$$10) |x+1| \leq 3 \text{ bo'lsa } x^2 - 2x + 2 \text{ eng katta va eng kichik butun sonlar qiymatini toping.}$$

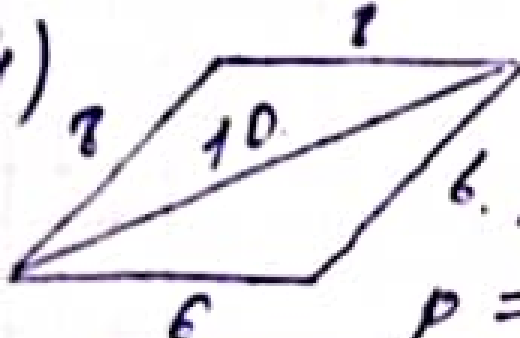
$$-4 \leq x \leq 2$$



11) 100 km 8 l yolda sarflaydi.
 100 km 2,8 l qit'ada sarflaydi.
 qit'ada necha % ko'p sarflaydi.

12) $(18)^{3n-2}$ butun sonlar qiymati
 119 ga teng n toping.

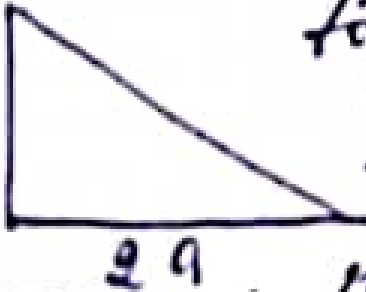
13) $a^2 - 4ab + b^2 - a^2b^2 - 1$ ning
 $a - b$ bo'luvchini topadimi.

14)  bo'yalgan shaklni
 b. yuxini toping.

$$p = 8 + 6 + 10 = 12$$

$$S = \sqrt{12 \cdot 4 \cdot 6 \cdot 2} = \sqrt{3 \cdot 4 \cdot 4 \cdot 3 \cdot 2 \cdot 2} = 4 \cdot 3 \cdot 2 = 24$$

$$S_D = 24 \cdot 2 = \boxed{48}$$

15)  to'g'ri burchakli
 uchburchakning
 kichik tomonlari
 aylantirishda
 hosil bo'lgan
 shaklni to'la sirtini toping



1 1

18) 4 ga bōlinadigan 2 xonali sonlar yig'indisini toping

$$\frac{12 + 96 \cdot 22}{2} = \boxed{1188}$$

$$\frac{99}{3} \Big| \frac{4}{24}$$

$$\frac{19}{16} \Big| \frac{3}{3}$$

$$24 - 2 = 22.$$

19) $\frac{(\sqrt{a} + 1)^2}{a - 1} - \frac{(\sqrt{a} - 1)^2}{a - 1} + 4\sqrt{a} = \frac{8\sqrt{a}}{a - 1} \cdot \frac{a - 1}{2\sqrt{a}} = 4.$

20) Og'irlik $100 m^3 - 21 m^3$ sig'adi.
 kumush 20
 bo'yi 12
 xonaga qancha sig'adi.
 balandligi 35 bo'lgan

$$V = 20 \cdot 12 \cdot 35 = 240 \cdot 35 = 2400 m^3$$

$$24 \cdot 21 = \boxed{1764 m^3} \text{ sig'adi.}$$

21) 12% aralashma 300 g unga
 100 g suv qoldi. necha %
 aralashma quritib bōldi.

22) $\sqrt{\frac{-x^2 + 20x - 100}{x^2 - 5|x| + 4}}$ funksiya
 aniqlanish sohasini toping.



22) olma - 3 dona
 nok - 3 dona
 shafoli - 3 dona

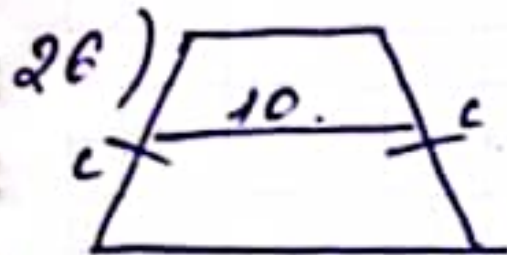
3 ta belaga neta xit usulda
 birinchi mumkin

23)
$$\begin{cases} x - \frac{1}{x^{2015}} \leq 0 \\ x - \frac{1}{x^{2020}} \geq 0. \end{cases}$$
 tengsizlikni
 yeching.

24) $a = 1^{0, (6)}$ $b = 2^{0, (9)}$ ~~cos~~ $c = 8^{0, (3)}$

$(a+b)^c = ?$
 $(1+2)^2 = 3^2 = \boxed{9}$

25) $(\cos 2x - \sin 2x)^2 = \frac{3}{7}$ ga teng
 bo'lsa $(\cos 2x + \sin 2x)$ ni qiz-
 matini toping.



$P = 36 \text{ sm}$

$l = 10.$

c - yonini

toping

$a+b=10$
 $\frac{a+b}{2} \quad a+b=20$
 $20+2c=36$
 $2c=16$
 $\boxed{c=8}$



$$27) \frac{a}{a} + \frac{b}{b} + \frac{c}{c} = 1 + 1 + 1 = 3$$

$$28) 1 + \frac{b}{a} + \frac{c}{a} = \frac{a}{b} + 1 + \frac{c}{b} = \frac{a}{c} + \frac{b}{c} + 1.$$

bo'lsa $\frac{a+b}{c} = ?$ toping.

29) tō'rtbur chakda $m = 6$
 $n = 10$
 ga teng bo'lsa m va n diagonallari
 tō'rtbur chakni yuzini toping.

$$\begin{array}{r|l} 3 & 6 \\ 3 & 7 \\ \hline 6 & ?x \end{array}$$

$$\frac{3}{6} \cdot \frac{3}{7} = \frac{1}{x}$$

2 3 тајим мактаб — 18000
Хасан Хусан, Ам Ванн — 89

$$1) \frac{1^3 + 2^3}{1+2} + \frac{1^3 + 2^3 + 3^3}{1+2+3} = 219$$

1) 100 ta shirinlik 1 tadan — (116)

5) $\sqrt{7}$ igit, $\sqrt{5}$.

6) Ково набир — 1920.

7) Кортюк 4 март = 33,52.

$$8) \frac{3}{2^2} + \frac{1}{2^4} + \frac{1}{2^6} = \left(\frac{5}{3}\right)$$

9) Терак тўғри сиса = (505)

(5) Izogul

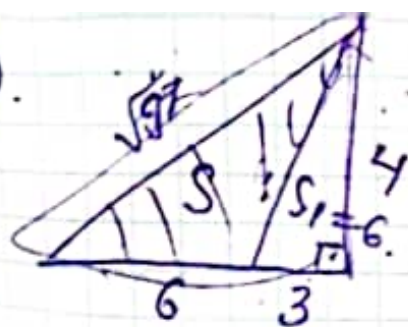
(6) 10! +

(7) Улам

(8)

$$\begin{array}{r|l} 3 & \\ 3 & \\ \hline 9 & \end{array}$$

12)



$$S_1 = 6$$

$$\begin{array}{r} + 18 \\ 81 \\ \hline 99 \end{array}$$

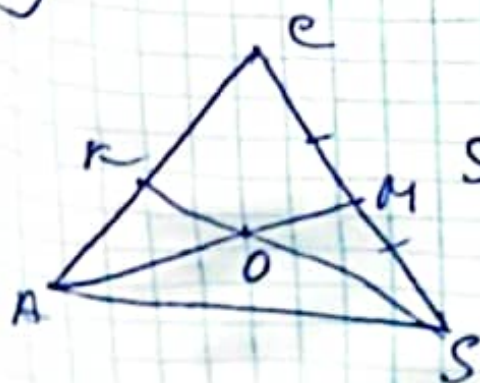
явоб: 12

$$S_1 = \frac{a \cdot b}{2} = \frac{3 \cdot 4}{2} = 6$$

$$S_2 = \frac{9 \cdot 4}{2} = 18$$

$$S_2 - S_1 = 18 - 6 = 12$$

13)



$$S_{MOKC} = 2 \cdot S_{KOA} = 2 \cdot 12 = 24$$

7)

$$x^2 + ax + b = 0$$

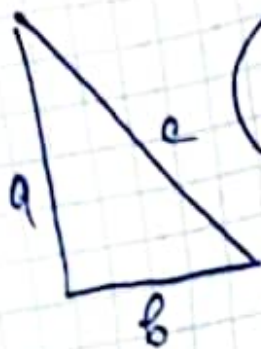
$$x_1 = 6$$

$$x + y + z = 0,$$

$$x_2 = 8$$

$$a + c = -14$$

8)



Ha

$$a, b, c \in \mathbb{R}$$

$$S \in \mathbb{R}?$$

9).



$$\sin \alpha.$$

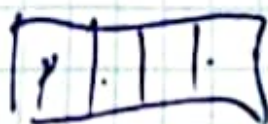
$$10) b_1 = 27 \quad q = -\frac{1}{3} \quad b_5 = ?$$

$$b_5 = b_1 \cdot q^4 = 27 \cdot \left(-\frac{1}{3}\right)^4 = \frac{1}{3}$$

11). 1, 2, 3, 4. соңларын ғыңтақор

$$6666(1+2+3+4) = 66660.$$

мәңмәңдән



(14) $S_{\text{surf}} = 4\pi R^2 = 4\pi (6400)^2 \text{ km}^2 = 1638400\pi$

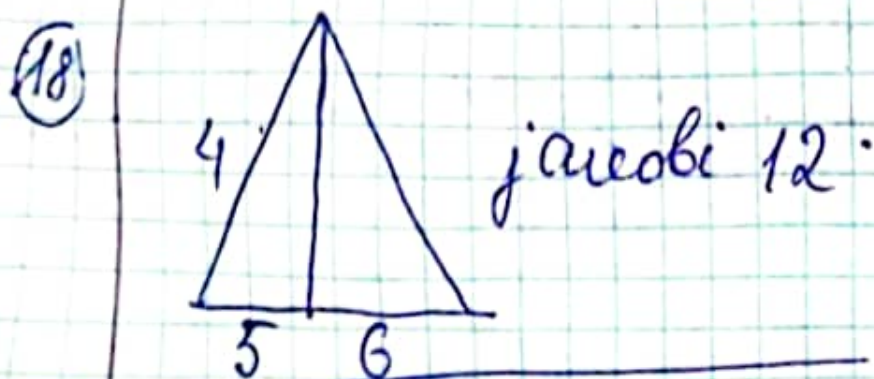
(15) $f(x)$ toq p-s b/sa, $f'(x)$ - juft bōladimi?
(ha)

(16)

$$\begin{aligned} 2^{x_1} &= 3 \\ 3^{x_2} &= 4 \\ 4^{x_3} &= 5 \quad \text{b-sa, } x_1, x_2, \dots, x_{14} = ? \\ 15^{x_{14}} &= 16. \end{aligned}$$

4 javob

(17) $y =$



(19)

$$p = 18 + 18 + 11 + 9 + 9 = 65$$

dm