29 mart

1) Bolada 60 ta olma va 60 ta nok bor. U hamma savat-larga bir xil sondagi olma solishi, noklarni esa xar xil solishi mumkin. Unga kopi bilan nechta savat kerak? __12__

2) $tg\,45° = \sqrt{2}-1$ __yoq__

3) $a\ln 2 + b\ln 3 + c\ln 5 + d\ln 7 = 2005$ bo'lsa, $c = ?$ __2005__

4) $\overline{xy} = 2(x+y)+1$ bo'lsa $x-y = ?$ -6 $\overline{17} = 2(1+7)+1$

5) Raqamlari yig'indisi 2 ga teng bo'lgan 3 xonali sonlar nechta. 3

6) Uch xonali sonning 1-raqami 1 ga teng shu bir raqamini sonning oxiriga o'tkazilsa hosil bo'l-gan son berilgan sonning 3 barobarini tashkil etadi. Berilgan sonning 3-raqamini toping.

7) $k = 1,2\ldots$ $f_k(\sin^k x + \cos^k x)$ bo'lsa $x = \dfrac{5\pi}{6}$ da.
$f_4(\quad) - f_6(\quad) = ?$

8)

Bo'yalgan soxaning yuzini toping.
A) $142 - 2\sqrt{126}$ B) $142 + 2\sqrt{126}$ E) 90 D) 80
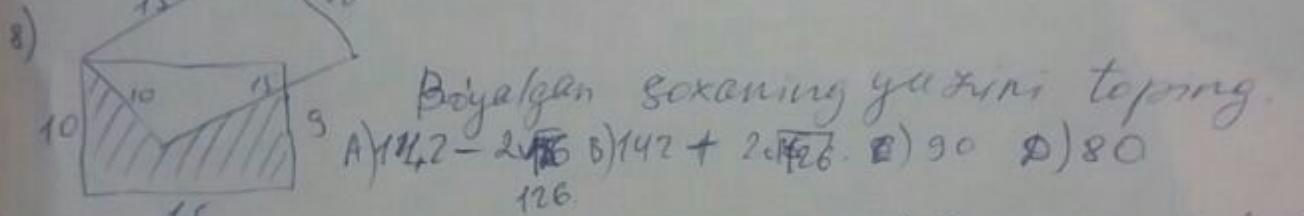
9) $A(3;6)$ nuqtaning $y = 2x-10$ t/chiziqqa nisbatan simmetrik nuqtasini toping $(\underline{11,2})$

10)
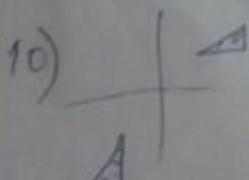
11) 2^{100} necha xonali son?

12)

11) $\sqrt{3x-3} + \sqrt{x^2-x} - \sqrt{x-1} = 3\sqrt{x} + \sqrt{27} - 3$

$x = ? \underline{10}$

13)

$\alpha = 30°$ $AB = \sqrt{3}$ A) $\frac{4\sqrt{7}}{7}$ B) $\frac{\sqrt{7}}{7}$ C) $\frac{3\sqrt{7}}{7}$

$AC = 6$

$H = ?$ D - $\frac{\sqrt{3}}{7}$ g'alat

javoblar

14)

$S_{oq\ kesim} = 10$

$S_{yon} = ?$ $\underline{10\pi}$

15)

$\frac{S_2}{S_1} = 3$ $\alpha = 60°$ $\frac{S_{oq}}{S_2} = ? = \underline{75\%}$

16)


$H = \sqrt{24}$ $BC = 2$

$AD = ? = \underline{10}$

anlq bfimda yeg
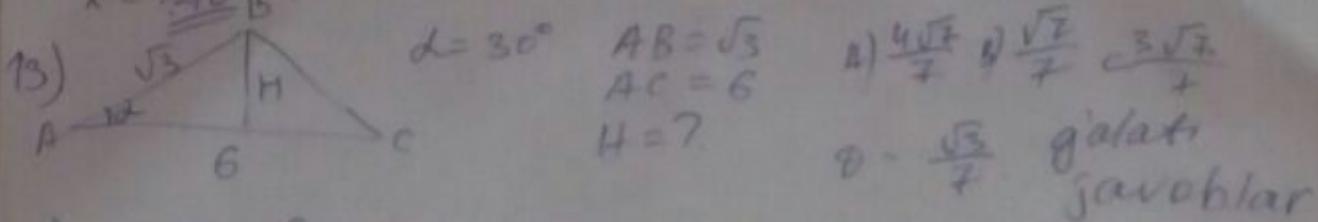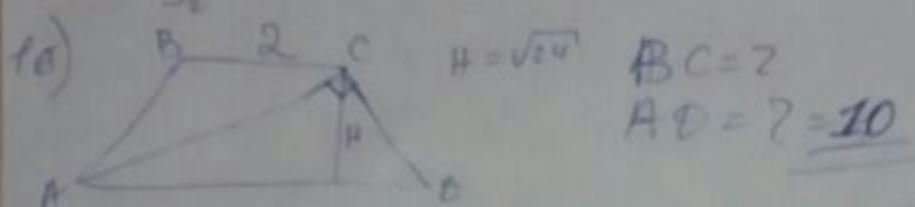
17) $4x + 3y + 3\sqrt{x} + 4\sqrt{y} - 1 = 0$ ga oxshagan

funksiya grafigi OX oqi bilan hosil qilgan.

burchak tg = ? $\frac{9}{10}$ $\left(\frac{16}{5}\right)$ $\frac{4}{3}$ $\frac{3}{4}$

olinizan

18) $y = 4x$ $y = -5x$ ... lar grafigidan ...

... D ba B (·) ... ... AB // OX

$|AB| = 18$ bolsa B(·) koordinatalar yigindisini

toping A) 60 B) 57 c) 45 D) 40

19)

$A(2,8)$ $C(8,8)$ $D(x,y)$ teng yonli trapetsiya ...

tashqi chizilgan. $x + y = ?$

$\underline{16}$

20)

$S_\diamond = 5x^2$

21)

$y = 8$

$S_v = ? = \underline{18}$

$x = -2$ $y = -x$

22) $\dfrac{x^3 + y^3 + z^3 - \ldots}{x^2 + \ldots} = ? \quad \dfrac{(x+y)(y+z)(x+z)}{}$

23) $a_4 - a_2 = 4 \quad a_7 = 14 \quad a_4 = ? = \underline{8}$

$2 \; 4 \; 6 \; 8 \; 10 \; 12 \; 14$

24)

-3
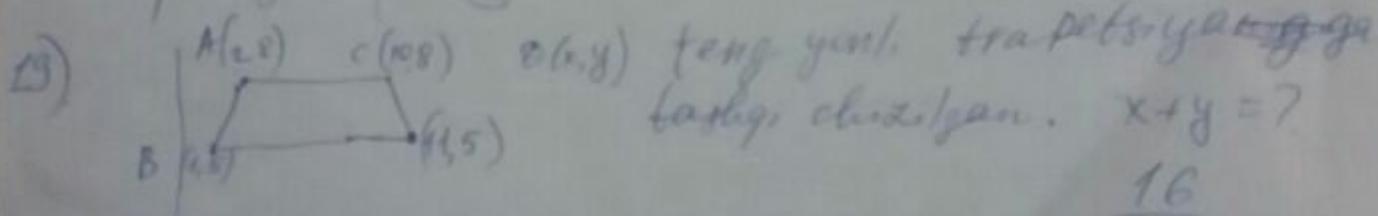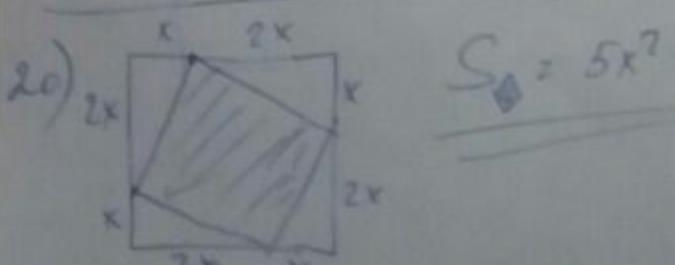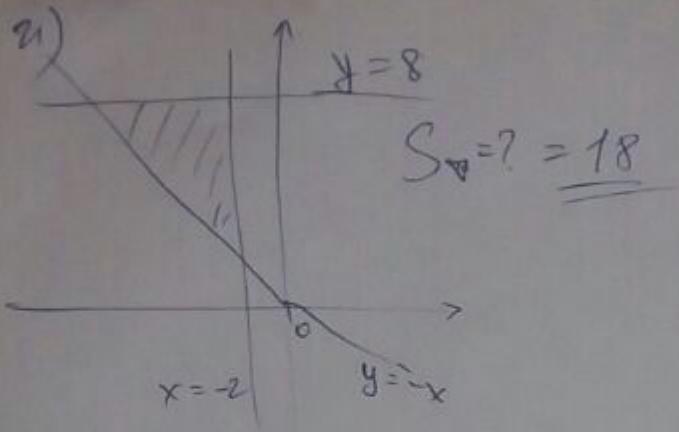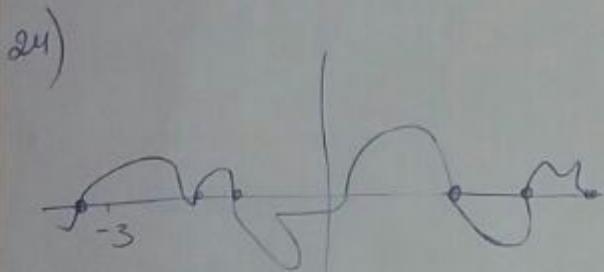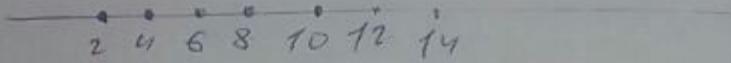
$f(x) - $ ф-я. $f(x) = 0$ boladigan
x_i lar $\sum_i = ?$

$x_1 + x_2 + x_3 \ldots x_{\ldots} = ?$
hammaga har xil tushadi

25)

$f(x)$

a $g(x)$ b

$S = ?$ (A) $\int\limits_a^b [f(x) - g(x)] dx$

B) $\int\limits_0^b g(x) - f(x) \quad$ C) $\int\limits_b^a f - g$
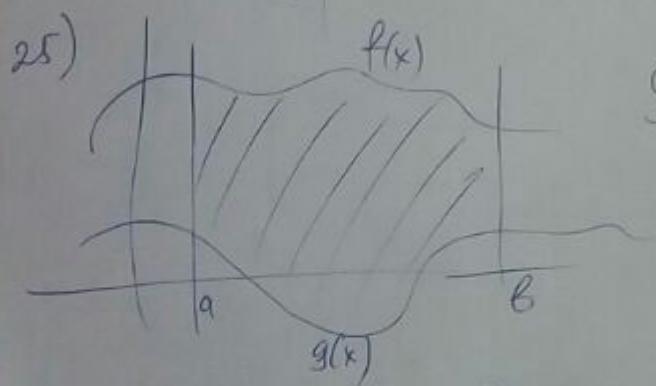
$\int\limits_b^a g - f \ldots$

26). $\left(\sqrt{5} - 2\right)^{x^2} < \left(2 + \sqrt{5}\right)^{-2x}$ A) $(0;2)$ B) $(-\infty;0) \cup (0;2)$ c) $(-2;0)$

27) $f(x) = \dfrac{(x-a)(x-b)}{(a-b)(b-a)} + \dfrac{(\ldots)(\ldots)}{(\ldots)(\ldots)} + \dfrac{(\ldots)(\ldots)}{(\ldots)(\ldots)} \cdot$ ~~x=a~~ $f(2) = ?$

aniqlab bo'lganda deb belgilaylik.

28) $n(A \setminus B) = 3 \cdot (B)$
$n(A \vee B) = 24$
$n(A \cap B) = 4.$ $N(A) = ?$ ⟨18 ④ 2⟩
22

29) $P = ?$

30) $\sqrt[3]{x^2} = \sqrt[3]{x} + 6.$ $\underline{x = 27}$

31) $3 \arccos x + 2 \arcsin x = \dfrac{3\pi}{2}$
х лар тизмеси? мумкин ухшаш

32) $\underline{H = 5\sqrt{2}}$

33) $\dfrac{1}{\sqrt{3}+2} + \dfrac{2}{\sqrt{3}-1} + 1 = ?$ то сан адандели менилни?

1)

$$V_{ABCDEB_1C_1F} = ?$$

C — 25 — C_1
5,5
B B_1 1 F
2,4 D 1 E
A A_1 D_1

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2)
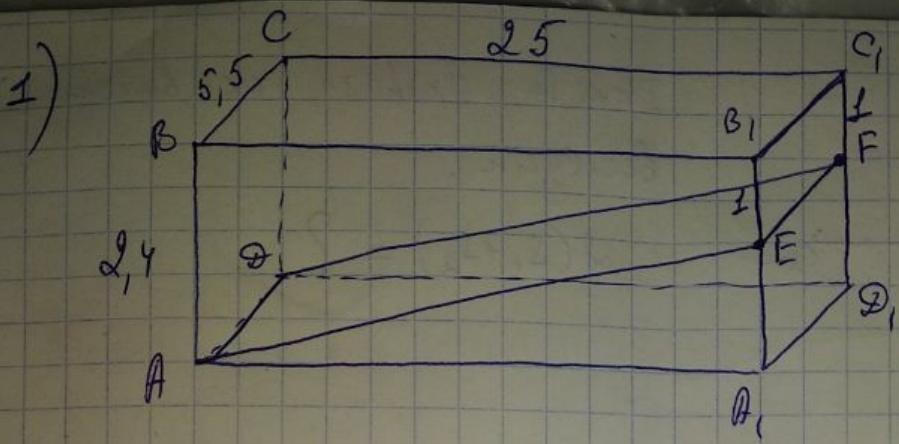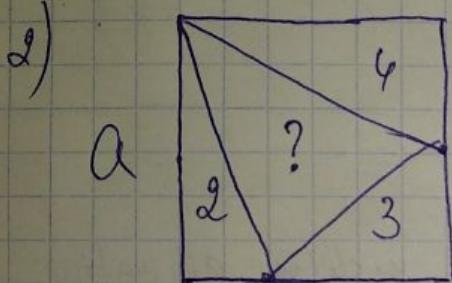
a, 4, ?, 2, 3, a

2, 3, 4 Uchburchaklar yuzasi
Kvadrat berilgan

---

3)

$$|\vec{a}| = 3 = |\vec{b}|$$

$$\vec{a}(3;4) \quad \vec{b}(5;12) \quad \vec{c}(9,12)$$

C, $\vec{c}$, $\vec{a}$, $\vec{b}$, A, B
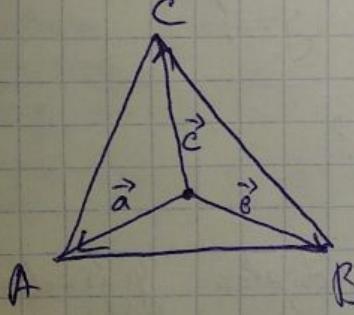
ABC muntazam uchburchak

$$h = ?$$

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4)

H

$$S_{yon} = 24\pi \qquad H = ?$$

$$V = 48\pi$$

5)
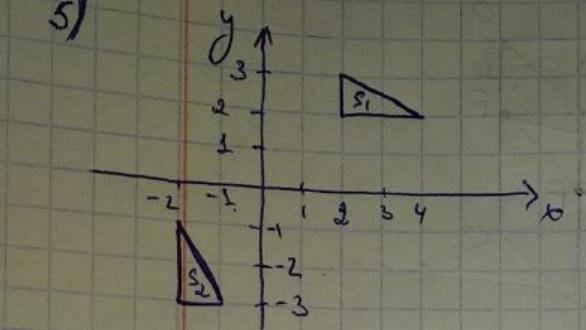
Ikkita o'xshash uchburchak berilgan.

$2(S_1 + S_2) = ?$

6)
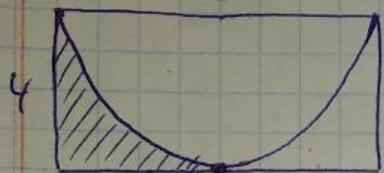
Shtrixlangan soha yuzini toping?

7)

$|x| = 3 \quad |y| = 4 \quad |z| = 6$

$|x+y| + |y+z| + |x+z|$ ning eng kichik qiymatini toping?

8)

$x^2 + y^2 + z^2 = 6x + 8y + 10z - 50 \qquad y = ?$

9)

$\sin\alpha = -\dfrac{4}{5} \qquad \pi \le \alpha \le \dfrac{3\pi}{2} \qquad tg\alpha = ?$

10)

$\sqrt{4-x} = x+2$ tenglamaning ildizlari yig'indisini toping?

11)

$\sqrt{\dfrac{7-x}{4}} + \sqrt{\dfrac{x-7}{4}} + 2x + 1 = A$

$\sqrt{A+1} + \sqrt{A-6} = ?$

12)

$$f(x-2)=1$$

tenglamaning ildizlari yig'indisini toping ?

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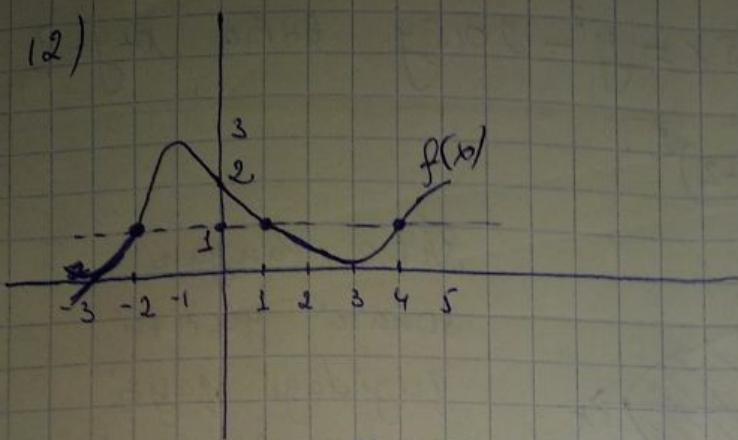
13) $\begin{cases} x=-z \\ y=2 \end{cases}$ $\dfrac{x^3+y^3+z^3-3xyz}{x^2+y^2+z^2-xy-xz-yz} = ?$

---

14) $tg\alpha + \dfrac{cos\alpha}{1+sin\alpha}$ soddalashtiring

---

15) Qutida 2 ta oq va 3 ta qora rangli sharlar bor. Qutidan ixtiyoriy tanlab 1 ta shar olinadi va qaytarib solinmaydi. Ikkita o'yinchi bor. Oldin Birinchi o'yinchi keyin ikkinchi o'yinchi qutidan shar oladi. Kim birinchi bo'lib oq rangli shar olsa yutadi. Birinchi o'yinchining yutish ehtimolini toping.

---

16) $ln(3x+3y) = lnx + lny$ bo'lsa $log_{\sqrt{2}}(x-8)+log_{\sqrt{2}}(y-8) = ?$

17) Agar x va y natural sonlar bo'lsa va $x^2+2y=2xy$ o'rinli bo'lsa, u holda $2x+y$ ni toping

18)

$x \neq y$, $\quad x^2 - 2015x = y^2 - 2015y$ bo'lsa $x+y = ?$

19)

$$x = (y-2)^2$$

$$x = -y^2 + 10$$
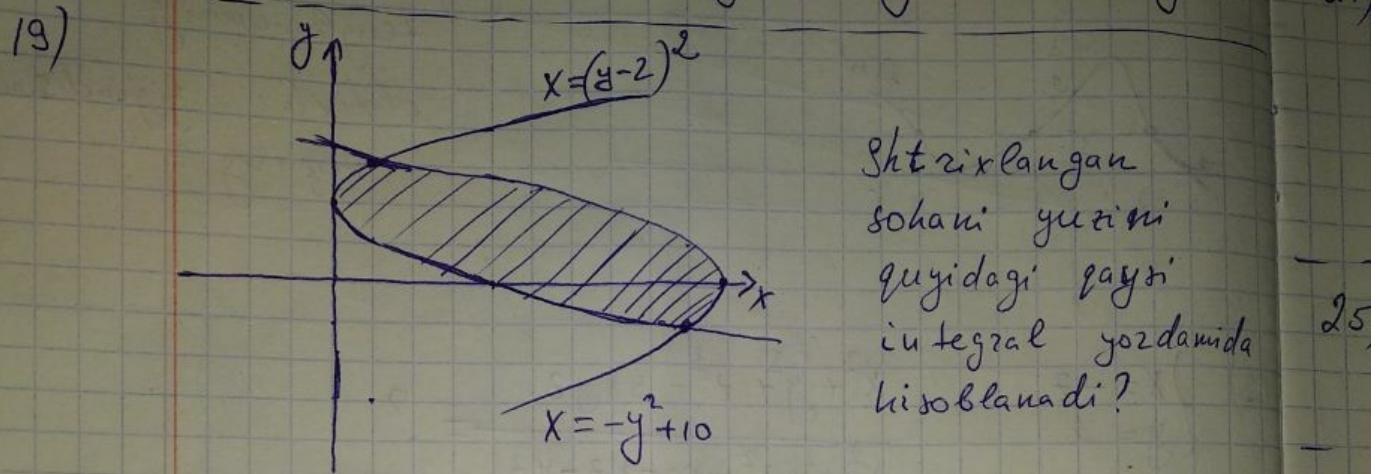
Shtrixlangan sohani yuzini quyidagi qaysi integral yordamida hisoblanadi?

20)

$2^{a+b+c} = 2^{a+b} + 2^{a+c} + 2^{b+c}$ bo'lsa $2^{-a} + 2^{-b} + 2^{-c} = ?$

21)

$(a-b)(a-c)(b-c) \neq 0$

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

$f(x)$ funksiyaning musbat qiymatlari nechta?

22)

$\dfrac{5^{\frac{1}{x}}}{3^{\frac{2}{x}}} = 8^{-1}$ bo'lsa, $\quad 8^x = ?$

23)

$\begin{cases} A = \{0, 1, 2, 3\} \\ (A \setminus B) \cup (B \setminus A) = \{-3, -1, 2, 3, 4, 5\} \end{cases}$

B to'plamning elementlari yig'indisini toping

27) $P(x)$ – ko'phad 3-darajali ko'phad.

$P(1) = P(2) = P(3) = 0$, $P(4) = a$ bo'lsa, ko'phadning

3-darajasini oldidagi koeffitsientni toping.

28)

$\alpha + \beta = 210°$

$\alpha = ?$
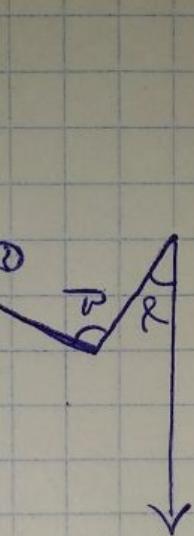
29) ... da A, B, C, D, E, F lar qatnashdi; A 1 ta, B 2 ta, C 3 ta, D 4 ta, E 5 ta odam bilan salomlashdi. F necha odam bilan salomlashdi?

1. $(2x^2 - 3y^2)^{2n+1}$ berilgan formulaning koeffitsiyentlar yig'indisini toping.

2. Asosidagi aylana uzunligi $8\sqrt{2}$ ga, balandligi 9 ga teng bo'lgan silindr hajmini toping.

3. 3200 metr yonilg'i olib kelindi. Tushgacha $\frac{1}{4}$ qismi va tushdan keyin $\frac{3}{5}$ qismi sotildi. Qancha yonilg'i qolgan?

4. Hisoblang: $16 \log_7 \sqrt[4]{7}$

5. $\cos \alpha = \frac{1}{4}$, $0 < \alpha < \frac{\pi}{2}$ bo'lsa, $\sin \alpha$ ni toping.

6. $\log_a b = 3$ va $\log_b c = 11$ bo'lsa, $\log_a bc$ ni toping.

7. $y = x \sin 2x$ funksiyasi berilgan bo'lsa, $f'(\pi) + f(\pi) + 2 = ?$

8. $2012^{2011^{2010}}$ ning oxirgi raqamini toping.

9. $\sin x = \frac{2}{5}$ bo'lsa, $\sin^8 x + \cos^8 x$ ni toping.

10. Uchidagi burchagi α ga teng tashqi chizilgan aylana radiuslari nisbatini toping.

11. $y = e^{-x^2} + \ln(\sin 2x)$ ning hosilasini toping.

12. Tekislikni kesib o'tmaydigan AB kesma berilgan. Kesmalar uchlaridan tekislikka perpendikulyar qilib, $AC = 3$ m va $BD = 2$ m ga teng kesma o'tkazilgan. $DC = 24$ dm bo'lsa, AB ni toping.

13. Asoslari muntazam to'rtburchakli piramida berilgan. To'rtburchak tomoni 12 cm va piramida balandligi 8 cm ga teng. Piramida yon tomoniga parallel qilib tekislik bilan kesilgan. Hosil bo'lga kesim yuzini toping.

14. Asoslarining yuzi 24 va 96 ga teng bo'lgan kesik piramida berilgan. Butun piramidaning balandligi 16 ga teng bo'lsa, kesik piramidaning hajmi nega teng?

15. a va b lar butun musbat sonlar bo'lsa, $\frac{a}{5} + \frac{b}{6} = 10$ tenglik bajarilsa, b ning eng kichik qiymatlaridan foydalanib, $a + b$ ning qiymatini toping.

16. Tenglamani yeching:
$$5^{x+2} + 3 \cdot 2^{x+4} + 2^{x+3} = 5^{x+1}$$

27. $8\cos\frac{3x}{2} \cdot \cos\frac{x}{2} - 3 = 6\cos 2x$ tenglamaning eng kichik yechimi π dan qanchaga kam?

28. Hisoblang: $\left(\text{tg}\frac{5\pi}{16} + \text{tg}\frac{3\pi}{16}\right) \cdot \cos\frac{\pi}{8} - 1$

29. Hisoblang:
$$\cos^2 47^0 + \cos^2 73^0 + \cos 47^0 \cdot \cos 73^0 + \frac{1}{2}$$

30. Agar $\sin\alpha + \cos\alpha = \sqrt{2}$ bo'lsa, $\text{tg}^3\alpha + \text{ctg}^3\alpha$ ning qiymatini toping.

17. Hisoblang:

$$1 - 2 + 3 - 4 + 5 - 6 + \cdots + 2009 - 2010$$

18. Ildizlar yig'indisini toping: $\sqrt{4-x} = x + 2$

19.

$$P_{ABCD} =?$$
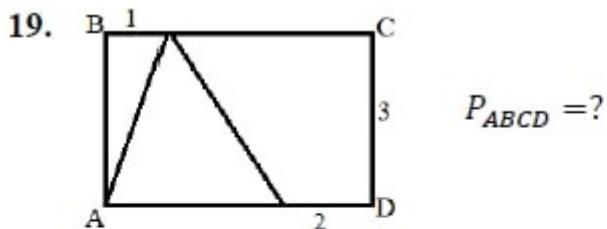
20. Ildizlar yig'indisini toping:

$$\left(x + \sqrt{5} + \sqrt{2}\right)\left(x - \sqrt{5} + \sqrt{2}\right) = 0$$

21. Tenglamani yeching: $\cos^2 5x + \sin^2 7x = 1$

22. $\sin 3x = \cos\left(x - \dfrac{\pi}{6}\right)$ tenglamaning $[0; 3\pi]$ kesmadagi barcha yechimlari yig'indisini toping.

23. Tenglamani yeching: $\sin 2x = \cos 3x$

24. $\sin 2x = \cos^4 x - \sin^4 x$ tenglamaning eng kichik musbat yechimini toping.

25. $\cos^4 13x - \sin^4 13x = \cos 24x$ tenglamaning barcha yechimlarini toping.

26. $2\cos^2 x - \cos x - 1 = 0$ tenglamaning eng kichik musbat yechimini toping.