

I variant

1. 25 % i o'zining teskarisiga teng bo'lgan natural sonni toping.

A) 2 B) 4 C) 6 D) 8

2. Barcha ikki xonali sonlar ko'paytmasi 3 ning qanday eng katta darajasiga qoldiqsiz bo'linadi?

A) 3^{40} B) 3^{40} C) 3^{44} D) 3^{42}

3. O'zining kvadratidan eng ko'p farq qiluvchi va kvadratidan katta bo'lgan sonni toping.

A) $\frac{2}{3}$ B) $\frac{3}{4}$ C) $\frac{1}{2}$ D) $\frac{1}{3}$

4. $\frac{5\sqrt{6}+12}{3\sqrt{2}+2\sqrt{3}}$ kasrni qisqartiring

A) $\sqrt{3}+\sqrt{2}$ B) $\frac{1}{\sqrt{3}+\sqrt{2}}$

C) $\frac{5}{3}\sqrt{3}$ D) $5\sqrt{6}$

5. $\frac{4}{5}$; $\frac{30}{17}$ va $\frac{18}{85}$ sonlarga qoldiqsiz

bo'linuvchi eng kichik natural sonni toping.

A) 45 B) 90 C) 85 D) 180

6. Soddashtiring:

$$\left(\frac{2+\sqrt{3}}{\sqrt{2}+\sqrt{2+\sqrt{3}}} + \frac{2-\sqrt{3}}{\sqrt{2}-\sqrt{2-\sqrt{3}}} \right)^2$$

A) $2\sqrt{3}$ B) 2 C) 1 D) $\sqrt{2}-1$

7. $x^2 + \frac{9}{x^2} = 5\left(x - \frac{3}{x}\right)$ tenglamaning butun

yechimlari yig'indisini toping.

A) 5 B) 3 C) 2 D) 9

8. Agar $a < 0$, $b < 0$, $c < 0$ va $ab = \frac{2}{3}$,

$bc = \frac{3}{4}$, $ac = \frac{4}{5}$ bo'lsa, a , b , c sonlarni

o'sish tartibida yozing.

A) $b < a < c$ B) $a < b < c$

C) $c < b < a$ D) $c < a < b$

9. $\sqrt{\frac{3x+8}{5-x}} > -1$ tengsizlikni butun

yechimlari yig'indisini toping.

A) 10 B) 7 C) -2 D) 4

10. Tenglamani yeching:

$$\frac{x^3-125}{x-5} = 8x+35$$

A) -2 B) 2 C) -3 D) 3

11. Agar x_1 va x_2 sonlar $x^2+2x-1=0$

tenglamaning ildizlari bo'lsa, $x_1^4+x_2^4$ ni hisoblang.

A) 34 B) 36 C) -2 D) 0

12. Yo'lovchi tezligi 60 km/soat poyezd

ichida ketayotib, qarshi kelayotgan poyezd deraza yonidan 4 sekundda o'tganini aniqladi. Agar u poyezdning uzunligi 120 m bo'lsa, tezligini aniqlang.

A) 55 B) 50 C) 40 D) 48

13. $(x-1)\sqrt{-x^2+x+2} \leq 0$ tengsizlikning butun yechimlari yig'indisini toping.

A) 2 B) 1 C) -1 D) 0

14. $x^2-6x+|x-4|+8=0$ tenglama

ildizlari yig'indisini toping.

A) 8 B) 7 C) 4 D) -4

15. $\frac{2}{|x+2|} \geq 1$ tengsizlikni butun yechimlari

nechta?

A) 5 B) 4 C) 3 D) 2

16. $a(a+1)(a+2)(a+3)+1$ ifodani

ko'paytuvchilarga ajrating.

A) $(a^2+3a+1)^2$ B) $(a^2+2a+1)^2$

C) $(a^2+1)(a^2+3)$ D) $(a^2+a+1)^2$



17. Agar $a = \frac{1}{2}(\sqrt{3} + 1)$ bo'lsa,

$4a^3 + 2a^2 - 8a + 7$ ni qiymatini hisoblang.

A) $2\sqrt{3} + 1$ B) 10 C) $\frac{\sqrt{3}}{2}$ D) 8

18. Soddalashtiring:

$$\frac{4}{1 + \frac{1}{a + \frac{1}{b}}} \cdot (ab + b + 1)$$

Javob: _____

19. 5 ta ruchka 3 ta daftar 1750 so'm. 1 ta ruchka va 1 ta daftar 450 so'm tursa, daftar ruchkadan qancha qimmat turadi?

Javob: _____

20. Agar $\sin \alpha = -\frac{\sqrt{5}}{5}$ va $\frac{3\pi}{2} < \alpha < 2\pi$

bo'lsa, $\sin(30^\circ - \alpha)$ ni hisoblang.

Javob: _____

21. Agar $\sin \alpha = 0,7$ bo'lsa, $\cos 2\alpha$ ni hisoblang.

Javob: _____

22. $y = x^2 - 4x + 5$ funksiya grafigi qaysi grafiklardan o'tadi?

Javob: _____

23. x_1 va x_2 sonlar $3x^2 + 4x - 2 = 0$

tenglama ildizlari. U holda ildizlari $\frac{1}{x_1}$

va $\frac{1}{x_2}$ bo'lgan kvadrat tenglama

tuzing.

Javob: _____

24. Qanday sonning $\frac{3}{5}$ qismi 7,2 dan uch

yarim martta katta?

Javob: _____

25. Nuqtadan aylanaga eng katta kesuvchi va urinma o'tkazilgan. Urinma 20 sm, aylana radiusi 21 sm bo'lsa, kesuvchi uzunligini toping.

Javob: _____

