

Matematika

1. Istalgan a va b natural sonlar uchun quyidagi ifodalardan qaysi birining qiymati har doim juft son bo'ladi?

- A) $ab(a+b)$ B) $ab+(a+b)$ C) $ab+a^2$
D) $ab+b^2$

2. a , b va c sonlar mos ravishda ketma-ket keluvchi juft natural sonlar. Agar $\frac{b}{4}$ natural son bo'lsa, a va c sonlar uchun quyidagilardan qaysi biri to'g'ri?

A) $\frac{a}{4}$ natural son, $\frac{c}{4}$ natural son emas

B) $\frac{a}{4}$ va $\frac{c}{4}$ natural sonlar emas

C) $\frac{a}{4}$ natural son emas, $\frac{c}{4}$ natural son

D) $\frac{a}{4}$ va $\frac{c}{4}$ natural sonlar

3. Hisoblang: $13 \cdot 6 + 4 \cdot 13$

- A) 130 B) 148 C) 136 D) 160

4. 7 va 42 sonlarining har biri nechtaga orttirilsa, birinchisi ikkinchisining 30 %ini tashkil etadi?

- A) 5 B) 8 C) 6 D) 7

5. O'zaro teskari sonlarni aniqlang.

1) $\sqrt{9+4\sqrt{5}}$ va $\sqrt{9-4\sqrt{5}}$;

2) $\sqrt{7}+\sqrt{5}$ va $\sqrt{7}-\sqrt{5}$;

3) $\sqrt{3+2\sqrt{2}}$ va $\sqrt{3-2\sqrt{2}}$;

4) $\sqrt{6}-2$ va $\sqrt{6}+2$

- A) 1, 2 B) 1, 3 C) 3, 4 D) 2, 3

6. Amallarni bajaring:

$$\sqrt{10} \cdot \sqrt{14} \cdot \sqrt{35} - \sqrt{6} \cdot \sqrt{15} \cdot \sqrt{10}$$

- A) 40 B) 35 C) 45 D) 50

7. Tenglamani yeching: $\frac{3}{4-x} = \frac{5}{6+x}$

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

8. Tenglamani yeching: $\frac{71-3x}{6x-9} = \frac{1}{3}$

- A) 14,5 B) 14,8 C) 14 D) -14,6

9. $\frac{x^2-y^2}{(x+y)^2} : \frac{7x-7y}{15x+15y}$ ifodani soddalashtiring.

- A) $\frac{7}{15}$ B) $2\frac{1}{7}$ C) $1\frac{2}{7}$ D) $1\frac{1}{7}$

10. $\frac{x^2-y^2}{(x+y)^2} : \frac{4x-4y}{14x+14y}$ ifodani soddalashtiring.

- A) $\frac{2}{7}$ B) $3\frac{1}{2}$ C) $2\frac{1}{3}$ D) $2\frac{1}{2}$

11. Hisoblang: $\operatorname{tg}\left(\frac{\pi}{6}\right) \cdot \cos\left(-\frac{\pi}{6}\right) - \sin\left(\frac{7\pi}{6}\right)$

- A) 0 B) $\frac{\sqrt{3}-1}{2}$ C) -1 D) 1

12. Agar $\alpha = 999^\circ$ bo'lsa, $(\cos \alpha; \sin \alpha)$ nuqta koordinatalar tekisligining qaysi choragida joylashadi?

- A) I B) II C) III D) IV

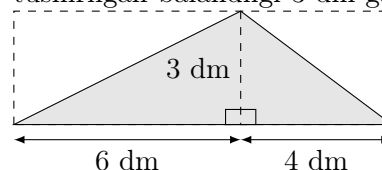
13. Agar $k < 0$, $b < 0$ bo'lsa, $y = kx + b$ chiziqli funksiyaning grafigi qaysi choraklarda yotadi?

- A) I, II va III B) I, III va IV C) I, II va IV
D) II, III va IV

14. 27 kilometr necha detsimetrga teng?

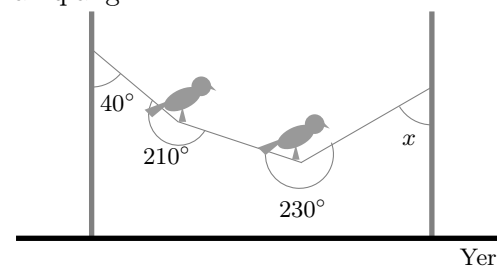
- A) 27000 B) 270000 C) 2700000
D) 27000000

15. Rasmda bo'yab ko'rsatilgan uchburchakning yuzini (dm^2) toping. Uchburchakning asosiga tushirilgan balandligi 3 dm ga teng.



- A) 18 B) 30 C) 15 D) 21

16. Rasmdan foydalanib x burchakning turini aniqlang.



- A) yoyiq B) o'tmas C) o'tkir D) to'g'ri

17. Kubning hajmi 324 cm^3 ga, parallelepipedning hajmi esa 27 cm^3 ga teng. Kubning hajmi parallelepiped hajmidan qanchaga (cm^3) katta?

- A) 297 B) 296 C) 257 D) 295

18. Hajmi 135 cm^3 ga teng bo'lgan to'g'ri burchakli parallelepiped asosining yuzi 15 cm^2 ga teng. To'g'ri burchakli parallelepipedning balandligini (cm) toping.

- A) 8 B) 9 C) 7 D) 6

19. ABC teng yonli ($AB = BC$) uchburchakning C uchidan AB tomoniga CD mediana o'tkazilgan. Agar $AC = 2BD$ bo'lsa, $\angle ABC$ ni toping.
A) 75° B) 90° C) 60° D) 120°

20. ABC teng yonli ($AB = BC$) uchburchakning C uchidan AB tomoniga CD mediana o'tkazilgan. Agar $AC = 2BD$ bo'lsa, $\angle ACD$ ni toping.
A) 45° B) 60° C) 30° D) 90°