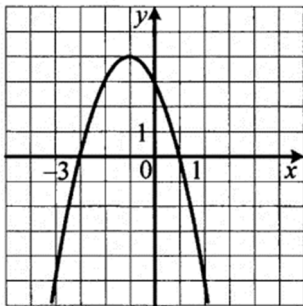## Test №4

1. $y = 3\sqrt{5}$ va $x = 5\sqrt{3}$ bo`lsa,

$$\sqrt{x^2 - 6xy + 9y^2} + \sqrt{y^2 - 2xy + x^2}$$

ning qiymatini toping.

A) $6\sqrt{5}$ B) $10\sqrt{3}$

C) $-6\sqrt{5}$ D) $12\sqrt{5} - 10\sqrt{3}$

2. Tenglamaning ildizlari yig`indisini toping.

$$x^2 + \frac{1}{x^2} + 2\left(x + \frac{1}{x}\right) - 6 = 0$$

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

3. Ushbu $43^{43} - 17^{17}$ ayirmani 10 bo`lgan-da xosil bo`ladigan qoldiqni toping.

A) 5 B) 2 C) 1 D) 0

4. $\dfrac{2}{7}$, $\dfrac{4}{11}$ va $\dfrac{6}{13}$ sonlarga bo`linganda bo`linma butun son chiqadigan eng kichik natural sonni toping.

A) 6 B) 12 C) 18 D) 24

5. Agar $\sqrt{t^5 + 3} - \sqrt{t^5 - 2} = 1$ bo`lsa, $\sqrt{t^5 + 3} + \sqrt{t^5 - 2}$ ning qiymatini toping?

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

6. Rasmda $y = f(x)$ funksiyaning grafigi tasvirlangan. Funksiyaning ildizlari ko`paytmasini toping?

A) 3 B) 1 C) 0 D) -3

7. Tengsizlikni yeching: $\dfrac{x^2 - 2x + 3}{x - 1} \geq 0$

A) $(1; \infty)$ B) $(-\infty; 1)$

C) $[1; \infty)$ D) $(-\infty; 1]$

8. k ning qanday qiymatida $x^2 + 2(k - 9)x + k^2 + 3k - 3$ ifodani to`la kvadrat shaklida tasvirlab bo`ladi.

A) 4 B) $\dfrac{7}{9}$ C) $\dfrac{11}{3}$ D) $\dfrac{5}{7}$

9. Yil boshida o`gil bolalar sinfdagi o`quvchilarning 30% ini, qizlar esa 21 nafarni tashkil etardi. Yilning o`rtasida sinfga 6 ta yangi bola keldi va 11 ta qiz boshqa sinfga. Shundan so`ng o`gil bolalar sinfdagi o`quvchilarning necha foizini tashkil etadi?

A) 50 B) 70 C) 60 D) 55

10. $\dfrac{8n - 24}{n}$ ifoda natural son bo`ladigan n ning natural qiymatlari nechta?

A) 6 B) 4 C) 3 D) 5

11. Tenglik x ning qanday qiymatlarida to`g`ri bo`ladi?

$$\sqrt{(2x - 1)^2 (3 - x)} = (2x - 1)\sqrt{3 - x}$$

A) $[0,5; 3]$ B) $[0; 3]$

C) $[1; 3]$ D) $(-\infty; 0,5]$

12. $7^6 + 27$ soni quyidagilarning qaysi biriga qolqidsiz bo`linadi?

A) 51 B) 49 C) 45 D) 13

13. $\left(3\dfrac{3}{8}\right)^{\frac{2}{3}} + 27^{\frac{2}{3}} \cdot 9^{0,5} \cdot 3^{-2} + \left(\left(\dfrac{7}{9}\right)^3\right)^0 - \left(-\dfrac{1}{2}\right)^{-2}$

ni hisoblang.

A) $\dfrac{9}{4}$ B) $\dfrac{8}{9}$ C) 1 D) 0

14. a va b ning qanday qiymatida quyidagi tenglik ayniyat bo`ladi?

$$\frac{1}{x^2-5x-6}=\frac{a}{x-6}+\frac{b}{x+1}$$

A) $a=7$; $b=-1$ C) $a=\dfrac{1}{7}$; $b=-\dfrac{1}{7}$

D) $a=-\dfrac{1}{7}$; $b=\dfrac{1}{7}$ B) $a=1$; $b=1$

15. G`ildirak $6\dfrac{2}{9}$ minutda $11\dfrac{1}{5}$ marta aylanadi, u $\dfrac{2}{120}$ soatda necha marta aylanadi?

A) 1 B) $1\dfrac{3}{5}$ C) $1\dfrac{2}{5}$ D) $1\dfrac{4}{5}$

16. Tengsizlikning butun yechimlari soni nechta? $4<\left|x^2-3x\right|\le 10$

A) 8   B) 4   C) 2   D) cheksiz ko`p

17. Agar $a+b=7$ va $ab=2$ bo`lsa, $a^2b^4+a^4b^2$ ning qiymatini toping?

A) 196   B) 180   C) 112   D) 98

18. $67\cdot 16\cdot 22\cdot 83+25\cdot 16\cdot 41$ yigindini 7 ga bo`lgandagi qoldiqni toping?

A) 1   B) 3   C) 6   D) 5

19. $x=\dfrac{11}{3}$, $y=\dfrac{111}{33}$, $z=\dfrac{1111}{333}$ larni o`sish tartibida yozing.

A) $y<z<x$ B) $z<y<x$

C) $x<y<z$ D) $z<x<y$

20. Hisoblang: $\dfrac{22^{44}+22^{43}+22^{42}}{22^{43}}$

A) $22\dfrac{1}{22}$ B) $22\dfrac{3}{22}$

C) $23\dfrac{1}{22}$ D) $23\dfrac{3}{22}$

21. Soddalashtiring:

$$\left(\frac{a+b}{\sqrt[3]{a^2}-\sqrt[3]{b^2}}+\frac{\sqrt[3]{ab^2}-\sqrt[3]{a^2b}}{\sqrt[3]{a^2}-2\sqrt[3]{ab}+\sqrt[3]{b^2}}\right):\left(\sqrt[6]{a}-\sqrt[6]{b}\right)$$

A) $a+1$ B) $\sqrt{a}-\sqrt{b}$

C) $\sqrt[3]{a}+\sqrt[3]{b}$ D) $\sqrt[6]{a}+\sqrt[6]{b}$

22. $y=3x-1$ va $y=-4x-3$ funksiyalarning grafiklari koordinata tekisligining qaysi choragida kesishadi?

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

23. Tenglamani yeching:

$$x+\cfrac{2}{x+\cfrac{2}{x+\cfrac{2}{....}}}=6$$

A) 1   B) $\dfrac{1}{2}$

C) $\dfrac{17}{3}$ D) hisoblab bo`lmaydi

24. $13^4+26^4+39^4$ sonining nechta natural bo`luvchisi mavjud?

A) 15   B) 12   C) 30   D) 10

25. n ning nechta natural qiymatida $\dfrac{n^2+3n+14}{n+1}$ ifoda butun qiymatlarni qabul qiladi?

A) 5   B) 6   C) 12   D) 10

1	A	6	D	11	A	16	C	21	D
2	A	7	A	12	D	17	B	22	C
3	D	8	A	13	A	18	D	23	C
4	B	9	C	14	C	19	B	24	C
5	D	10	D	15	D	20	C	25	A