## 23-Mavzu. Funksiyalar

1. Funksiya $f(x) = -x^2 + 3x - 2$ formula bilan berilgan. $f(-1)$ ni toping.
   A) –4　　B) –2　　C) –6　　D) 0

2. $f(x) = 4x - 2$ bo'lsa, $f(x) = 2$ bo'ladigan x ning qiymatini toping.
   A) 1　　B) 2　　C) 0　　D) –1

3. Funksiya $y = 1 + 2x$ formula yordamida berilgan. Javoblar orasidan eng kattasini toping.
   A) $y(1)$　　B) $y(-1)$　　C) $y(2)$　　D) $y(-2)$

4. Funksiya $y = 2x - 3$ formula yordamida berilgan. $\frac{y(-1) \cdot y(9)}{y(4)}$ ni hisoblang.
   A) 12　　B) 15　　C) -12　　D) -15

5. $f(x) = \left(1 + \frac{1}{x}\right)\left(1 - \frac{1}{x}\right)$ bo'lsa, $f(2)$ ni toping.
   A) $\frac{1}{4}$　　B) $\frac{1}{2}$　　C) $\frac{3}{4}$　　D) $1\frac{1}{4}$

6. $g(x) = \left(x - \frac{1}{x}\right)\left(x + \frac{1}{x}\right)$ bo'lsa, $g\left(\frac{1}{2}\right)$ ni toping.
   A) $-3{,}5$　　B) $-3{,}75$　　C) $-4{,}25$　　D) $-4{,}75$

7. $f(x) = x^3 - 3x^2 + 3x$ berilgan. $f(\sqrt[3]{7} + 1)$ ni toping.
   A) 4　　B) 6　　C) 8　　D) 12

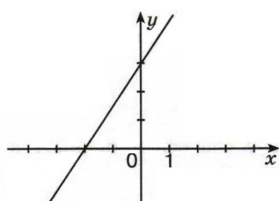8. Rasmda berilgan qaysi nuqtalar bir xil abssissaga ega?
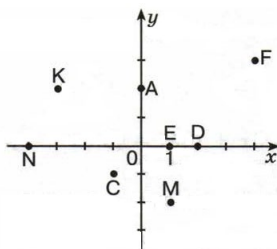
   A) K va A　　B) A va M　　C) M va E　　D) D va E

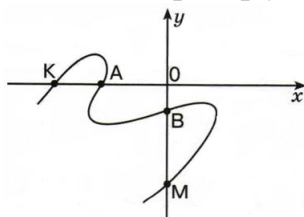**9.** Rasmda berilgan D nuqtaning koordinatalarini toping.
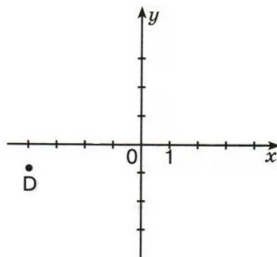
A) $(-1; -4)$ B) $(1; 4)$ C) $(-4; -1)$ D) $(4; 1)$

10. Rasmda berilgan to'g'ri chiziq ordinatalar o'qini qaysi nuqtada kesib o'tadi?

A) $(3; 0)$ B) $(0; 3)$ C) $(-2; 0)$ D) $(0; -2)$

**11.** Rasmda berilgan egri chiziq abssissa o'qini qaysi nuqtalarda kesib o'tadi?

A) A va B   B) B va M   C) K va A   D) K va M

12. Lift birinchi qavatdan uchinchi qavatga ko'tarilib, bir muddat harakatsiz tinch turib qoldi va ikkinchi qavatga tushdi va shundan so'ng buzulib qoldi. Quyidagi javoblarning qaysi birida lift turgan o'rnidan birinchi qavatgacha masofa grafigi tasvirlangan?
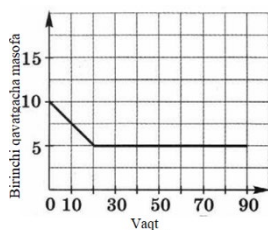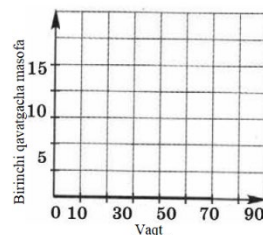
A)
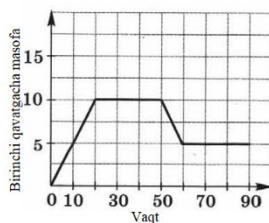
B)
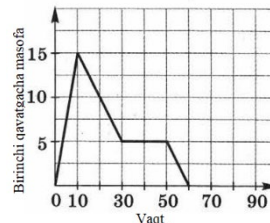
C)

D)

13. Funksiyaning grafigidan foydalanib, $x= -1$ bo'lganda funksiyaning
qiymatini toping.
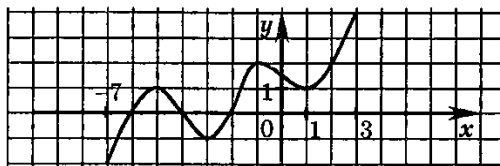
A) –6,5   B) 2   C) –3   D) –6,5;–3

14. Funksiyaning grafigidan foydalanib, funksiyaning qiymati -1 ga teng
bo'ladigan argumentning barcha qiymatlarini toping.
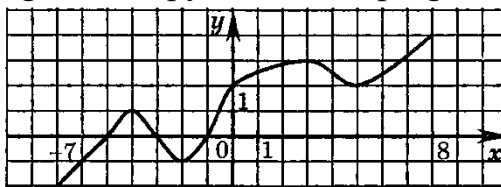
A) – 6   B) – 2   C) – 6;–2   D) –1

15. Chizmada $(-2;12)$ intervalda aniqlangan $y = f(x)$ funksiya grafigi
tasvirlangan. Funksiyaning qiymati 2 ga teng bo'ladigan argumentning nechta
qiymati mavjud?

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

16. Funksiyaning grafigidan foydalanib, funksiyaning qiymatlari jadvalini ko'rsating.

A)

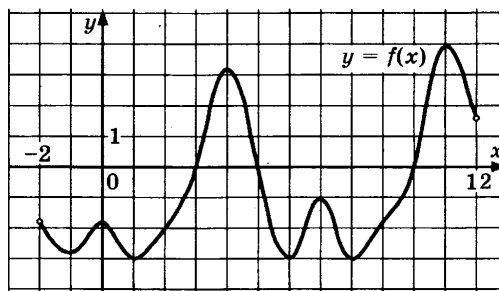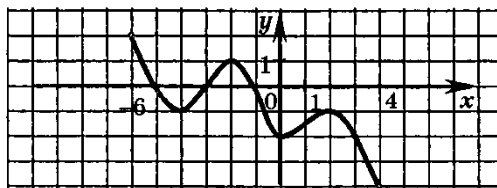| x	-6	-3	0	2
y	2	1	-2	1

B)

x	-6	-3	0	3
y	0	2	-1	-6

C)

x	-6	-3	0	2
y	2	3,5	-2	-1

D)

x	-6	-3	0	2
y	2	0	-2	-1

17. $y = -\dfrac{3}{x} + 5$ formula bilan berilgan funksiyaning qiymatlari berilgan jadvalini ko'rsating.

A)

x	-3	-1	1	3
y	-4	-2	2	4

B)

x	-3	-1	1	3
y	6	8	-8	-6

C)

x	-3	-1	1	3
y	6	8	-2	-4

D)

x	-3	-1	1	3
y	6	8	2	4

18. $y = \dfrac{\sqrt{x+1}+\sqrt{x-2}}{\sqrt{x-3}-\sqrt{5-x}}$ funksiyaning aniqlanish sohasiga tegishli barcha butun sonlarning yig'indisini toping.
A) 12   B) 8   C) 7   D) 0

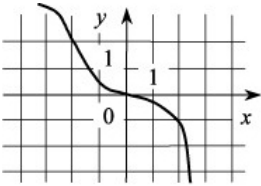**19.** $y = \dfrac{\sqrt{2x-x^2+15}+\sqrt{x}}{\sqrt{9x-x^2-14}}$ funksiyaning aniqlanish sohasini toping.
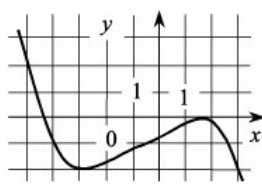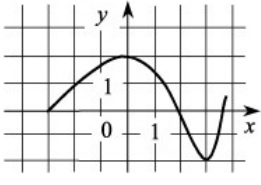A) $[0; 5]$ B) $(2; 5]$ C) $[2; 7]$ D) $[0; 7]$

20. $y = \sqrt{x^2 - 6x + 8}$ funksiyaning aniqlanish sohasini toping.
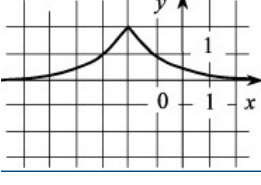A) $(-\infty; 2]$ B) $[4; \infty)$ C) $(-\infty; 2] \cup [4; \infty)$ D) $[2;4]$

21. $y = \sqrt[7]{6 - x - x^2}$ funksiyaning aniqlanish sohasini toping.
A) $[0; +\infty)$ B) $(-\infty; +\infty)$ C) $[-3; 2]$ D) $(-\infty; 0]$

22. $y = \frac{\sqrt[4]{x+2} - \sqrt[4]{x}}{x^2 + x - 2}$ funksiyaning aniqlanish sohasiga tegishli bo'lgan eng kichik butun sonni toping.

A) 0   B) −1   C) −2   D) 1

23. $y = \sqrt{x^2 - 2x - 15} + \sqrt{-x^2 + 2x + 15}$ funksiya aniqlanish sohasini toping.

A) $(-\infty; -3] \cup [5; \infty)$ B) $[-3; 5]$ C) $\varnothing$ D) $\{-3; 5\}$

24. $y = \sqrt{\frac{x^2 - 5x + 6}{|x^2 - 5x + 6|}}$ funksiyaning aniqlanish sohasini toping.

A) $(-\infty; 2] \cup [3; \infty)$ B) $(-\infty; 2) \cup (3; \infty)$ C) $(2; 3)$ D) $(-\infty; -3) \cup (-2; \infty)$

25. Nuqtalardan qaysilari $y = -2x + 5$ funksiya grafigiga tegishli?

1) (0;4); 2) (0;5); 3) (2,5;0); 4) (2;3); 5) (4;3).

A) 1,4;   B) 4,5;   C) 2,3;   D) 3,4.

26. Nuqtalardan qaysilari $y = 5x - 6$ funksiya grafigiga tegishli emas?

1) (0;–6); 2) (2;4); 3) (0;6); 4) (1;1); 5) (3;9).

A) 1,3;   B) 2,4;   C) 1,5;   D) 3,4.

27. Agar $f(x)$ funksiya davri 3 ga teng davriy funksiya bo'lib, $f(2) = 5$ bo'lsa, $2f(-1) + 3f(8) - 4f(-4)$ ni toping.

A) 1   B) 0   C) −1   D) 5

28. [–3;2] kesmada monoton o'suvchi funksiyaning grafigi berilgan javobni ko'rsating.

A)   B)

C)   D)

29. Funksiyalarning qaysilari o'suvchi?

1) $y = \sqrt[3]{-x}$ 2) $y = \sqrt[5]{x^2}$ 3) $y = -2x + 7$ 4) $y = -\sqrt{3 - x}$

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

30. $f(x; y) = x^2 + y^2$ bo'lsa, $f(f(1; 2); f(2; 1))$ ni hisoblang.
   A) 10   B) 25   C) 40   D) 50

30. $f(x; y) = x^2 + y^2$ bo'lsa, $f(f(1; 2); f(2; 1))$ ni hisoblang.
   A) 10   B) 25   C) 40   D) 50

Kalitlar

1.	C	16.	D
2.	A	17.	D
3.	C	18.	B
4.	D	19.	B
5.	C	20.	C
6.	B	21.	B
7.	C	22.	A
8.	C	23.	D
9.	C	24.	B
10.	B	25.	C
11.	C	26.	D
12.	A	27.	D
13.	B	28.	B
14.	C	29.	C
15.	C	30.	D