50-Mavzu. Koordinatalar sistemasi

1. A(0;1) va B(5;–3) nuqtalar berilgan. Agar B nuqta AC kesmaning o‘rtasi bo‘lsa, C nuqta koordinatalar yig‘indisini toping.
A) 2 B) 2,5 C) 3 D) 4

2. A(4;–1) va B(2;–5) nuqtalar berilgan. Agar B nuqta AC kesmaning o‘rtasi bo‘lsa, C nuqta koordinatalar yig‘indisini toping.
A) –9 B) –5 C) 12 D) –4

3. A(–2;3) nuqtaga OX o‘qqa nisbatan simmetrik nuqtaning koordinatalarini toping.
A) (2;3) B) (2;–3) C) (–2;–3) D) (–2;3)

4. (7; –12) nuqtaga koordinatalar boshiga nisbatan simmetrik bo‘lgan nuqtaning koordinatalarini toping.
A) (7; 12) B) (–7; 12) C) (–7; –12) D) (12; –7)

5. (7; –12) nuqtaga ordinatalar o‘qiga nisbatan simmetrik bo‘lgan nuqtaning koordinatalarini toping.
A) (7; 12) B) (–7; 12) C) (–7; –12) D) (12; –7)

6. (7; –12) nuqtaga abssissalar o‘qiga nisbatan simmetrik bo‘lgan nuqtaning koordinatalarini toping.
A) (7; 12) B) (–7; 12) C) (–7; –12) D) (12; –7)

7. (5; –8) nuqtaning (–4; 9) nuqtaga nisbatan simmetrik bo‘lgan nuqtasini toping.
A) (–13; 23) B) (–14; 14) C) (–13; 24) D) (–13; 26)

8. (3; 4) nuqtani koordinatalar boshiga nisbatan soat mili harakatiga teskari yo‘nalishida 90° ga burish natijasida hosil bo‘lgan nuqtaning koordinatalarini aniqlang.
A) (–3; 4) B) (3; –4) C) (–4; 3) D) (4; –3)

9. (3; 4) nuqtani koordinatalar boshiga nisbatan soat mili harakati yo‘nalishida 90° ga burish natijasida hosil bo'lgan nuqtaning koordinatalarini aniqlang.
A) (–4; 3) B) (4; –3) C) (–3; 4) D) (3; –4)

10. Uchlari A(0; 0), B(3; –1), C(6; 2) va D(l; 2) nuqtalarda bo‘lgan to‘rtburchakning qaysi tomoni eng katta?
A) BC B) AB C) AD D) CD

11. A(2; 3), B(3; –4), C(–6; 5) va D(–5; 4) nuqtalardan qaysi biri koordinatalar boshidan eng uzoqda joylashgan?
A) A nuqta B) B nuqta C) C nuqta D) D nuqta

12. ABC uchburchakning uchlarining koordinatalari A(–1;2), B(–1;5), C(–4;0) berilgan. Uchburchak turini aniqlang.
A) o‘tkir burchakli B) o‘tmas burchakli C) to‘g‘ri burchakli D) teng yonli

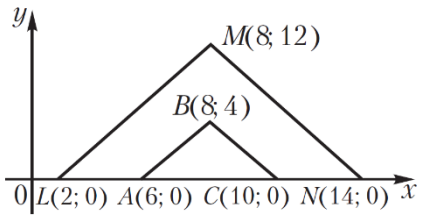
13. Uchlari A(3;0), B(0;2) va C(0;0) nuqtalarda bo‘lgan uchburchakning CM bissektrisasi bo‘lsa, M nuqtaning koordinatalarini toping.
A) $\left(\frac{4}{3};\frac{4}{3}\right)$ B) $\left(\frac{6}{5};\frac{6}{5}\right)$ C) $\left(\frac{5}{6};\frac{5}{6}\right)$ D) $\left(\frac{3}{4};\frac{3}{4}\right)$

14. Uchlari A(10; 11), B(10; 3) va C(2; 3) nuqtalarda bo‘lgan uchburchakning B uchidan AC tomonga BD balandlik tushirilgan. D nuqtaning koordinatalari yig‘indisini toping.
A) $8\sqrt{2}$ B) $10\sqrt{2}$ C) 9 D) 13

15. Uchlari A(3;0), B(0;2) nuqtalarda bo‘lgan kesmani A uchidan boshlab hisoblaganda 4:3 nisbatda bo‘ladigan M nuqtaning koordinatalarini toping.
A) M$\left(\frac{8}{7};\frac{9}{7}\right)$ B) M$\left(\frac{12}{7};\frac{13}{7}\right)$ C) M$\left(\frac{9}{7};\frac{8}{7}\right)$ D) M$\left(\frac{13}{7};\frac{12}{7}\right)$

16. Uchburchakning uchlari $(1;2)$; $(3;4)$ va $(5;-1)$ nuqtalarda joylashgan. Shu uchburchak medianalarining kesishgan nuqtasi koordinatalarini toping.
A) $(2;3)$ B) $(3;2)$ C) $(3;3)$ D) $(3;\frac{5}{3})$

17. Rasmda uchburchaklar uchlarining koordinatalari berilgan. ABC uchburchak yuzi LMN uchburchak yuzidan necha marta kichik?



A) 8 B) 9 C) 12 D) 16

18. ABC uchburchak ikkita uchining koordinatalari A(–1;11), B(7;11) bo‘lib, C uchi esa $y = 5$ to‘g‘ri chiziq ustida yotishi ma’lum. ABC uchburchak yuzini toping.
A) 18 B) 24 C) 48 D) 36

19. ABCD Parallelogramm uchta uchining koordinatalari A(1;–3), B(2; 5), C(–3;1). Uning to‘rtinchi D uchining koordinatalari yig‘indisini toping.
A) –13 B) –11 C) –9 D) –7

20. t ning qanday qiymatlarida $A(3;8)$, $B(9;t)$ va $C(-5;0)$ nuqtalar bir to’g’ri chiziqda yotadi?
A) 14 B) 13 C) 12 D) 15

21. A(0;*y*;0) nuqta B(0;2;2) va C(3;3;2) nuqtalardan baravar uzoqlikdaligi ma’lum bo‘lsa, *y* ni toping.
A) 1,5 B) 1 C) 2 D) 7

22. *x* ning qanday qiymatida M(*x*;0;0) nuqta $M_1(1;2;-\sqrt{3})$ va M_2(–2;1;0) nuqtalardan baravar uzoqlashgan?
A) 0,5 B) 0 C) –1 D) –2

23. Kesmani bir uchining koordinatasi A(1;–5,4), o‘rtasining koordinatasi C(4;–2,3). Ikkinchi uchining koordinatasini aniqlang.
A) (6;5,3) B) (7; –1,2) C) (7;1,2) D) (5;4,6)

24. Kesma uchlarining koordinatalari A (1;–2,4) va B (3;–4,2). Kesma o‘rtasining koordinatasini toping.
A) (2; –4,3) B) (3; –3,3) C) (2; –3,3) D) (2; –3,4)

25. A(1;2;3) nuqtadan OX o‘qqacha bo‘lgan masofani toping.
A) 19 B) $\sqrt{5}$ C) $\sqrt{10}$ D) $\sqrt{13}$

26. Quyidagilardan qaysi biri XY tekislikka nisbatan M(–4;3;–1) nuqtaga simmetrik bo‘lgan nuqta?
A) (–4;3;1) B) (4;3;–1) C) (–4;–3;–1) D) (4;–3;–1)

27. Quyidagi nuqtalardan qaysi biri XY tekislikda yotadi?
A) (–4;3;0) B) (0;–7;1) C) (2;0;–8) D) (0;0;7)

28.A(*x*;0;0) nuqta B(1;2;3) va C(–1;3;4) nuqtalardan teng uzoqlikdaligi ma’lum bo‘lsa, *x* ni toping.
A) –1 B) –2 C) –3 D) 3

29. A(1;2;3) nuqtadan OZ o‘qqacha bo‘lgan masofani toping .
A) 19 B) $\sqrt{5}$ C) $\sqrt{10}$ D) $\sqrt{13}$

30. Quyidagilardan qaysi biri XZ tekislikka nisbatan M(–4;3;–1) nuqtaga simmetrik bo‘lgan nuqta?
A) (–4;3;1) B) (4;3;–1) C) (–4;–3;–1) D) (4;–3;–1)

31. Quyidagi nuqtalardan qaysi biri YZ tekislikda yotadi ?
A) (–4;3;0) B) (0;–7;1) C) (2;0;–8) D) (1;0;7)

32. A(x;0;0) nuqta B(0;1;2) va C(3;1;0) nuqtalardan teng uzoqlikdaligi ma’lum bo‘lsa, x ni toping.
A) $\frac{5}{6}$ B) $\frac{6}{5}$ C) $-\frac{5}{6}$ D) $-\frac{6}{5}$

33. Uchlarining koordinatalari A(3;1) B(10;1) C(10;7) D(7;7) nuqtalarda bo‘lgan to‘rtburchakning yuzini toping.
A) 54 B) 36 C) 45 D) 30

34. MNPQ to‘g‘ri to‘rtburchakning uchta uchining koordinatalri beirilgan: M(0;0), N(0;2), P(3;2). Q uchining koordinatalarini toping.
A) (3;0) B) (0;3) C) (2;0) D) (–3;0)

35. Uchlari A(3;2), B(1,−4) va C(−2;5) nuqtalarda bo‘lgan uchburchakning yuzini toping.
A) 16 B) 18 C) 20 D) 21

36. Uchlari A(0;0) B(3;4) va C(–9;12) nuqtalarda bo‘lgan uchburchakning A burchagini toping.
A) arccos0,92 B) arccos0,96 C) arccos0,28 D) $\frac{\pi}{24}$

37. Uchlari A(1;3), B(–1;1) va C(2;2) nuqtalarda joylashgan uchburchakka tashqi chizilgan aylana markazining koordinatalarini toping.
A) $(1;2)$ B) $(0{,}5;1{,}5)$ C) $(\frac{1}{3};2)$ D) $(0;2)$

38. ABC uchburchak uchlarining koordinatalari berilgan: A(8;12), B(–8;0) va C(–2;8). Uchburchak CM medianasi yotgan to‘g‘ri chiziq tenglamasini tuzing.
A) $x+y=6$ B) $x+y+6=0$ C) $x+2y+3=0$ D) $x-y-6=0$

39. ABC uchburchak uchlarining koordinatalari berilgan: A(6;-8), B(4;6) va C(–1;2). Uchburchak CM medianasi yotgan to‘g‘ri chiziq tenglamasini tuzing.
A) $x+2y+3=0$ B) $x+y+6=0$ C) $x+2y=3$ D) $x-y-6=0$

40. A(3;0) va B(–1;2) nuqtalardan o‘tuvchi hamda markazi $y=x+2$ to‘g‘ri chiziqda yotgan aylana tenglamasini toping.

A) $(x-5)^2+(y-3)^2=25$ B) $(x-4)^2+(y-5)^2=25$

C) $(x-3)^2+(y-4)^2=25$ D) $(x-3)^2+(y-5)^2=25$

41. $x^2+y^2-12x+6y+9=0$ tenglama bilan berilgan aylanaцing markazini toping.

A) (6; –3) C) (–3; 6) B) (–6; 3) D) (3; –6)

42. Koordiniata tekisligida A(0;–3) va B(0;1) nuqtalar berilgan. C nuqta esa $(x-1)^2+y^2=4$ aylananing ustida. ABC uchburchakning yuzasining eng katta qiymatini toping.

A) 4 B) 5 C) 6 D) 7

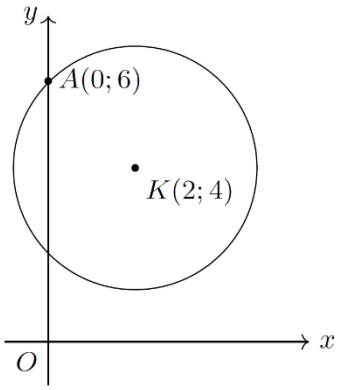
43. M(3;–1) nuqtadan $x^2+2x+y^2-4y=11$ aylanagacha bo‘lgan masofani toping.

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

44. A(2;13) nuqtadan $x^2+y^2-4x-8y-5=0$ aylanaga urinma o‘tkazilgan. A nuqtadan urinish nuqtasigacha bo‘lgan masofani toping.

A) $3\sqrt{5}$ B) $2\sqrt{14}$ C) 6 D) $4\sqrt{2}$

45. Rasmda markazi K nuqtada bo‘lgan aylana tasvirlangan. Quyidagilardan qaysi biri berilgan aylananing tenglamasi bo‘ladi?



A) $x^2+y^2-4x-8y+16=0$ B) $x^2+y^2-4x-8y+24=0$

C) $x^2+y^2+4x+8y+12=0$ D) $x^2+y^2-4x-8y+12=0$

Kalitlar

1.	C	16.	D	31.	B
2.	A	17.	B	32.	A
3.	C	18.	C	33.	D
4.	B	19.	B	34.	A
5.	C	20.	A	35.	B
6.	A	21.	D	36.	B
7.	D	22.	A	37.	B
8.	C	23.	C	38.	A
9.	B	24.	C	39.	C
10.	D	25.	D	40.	D
11.	C	26.	A	41.	A
12.	B	27.	A	42.	C
13.	B	28.	C	43.	A
14.	D	29.	B	44.	B
15.	C	30.	C	45.	D