

Practice 55

Chapter 13 Practice

1. Given points $A(1, 4)$ and $B(-3, 7)$, find the following.

a. The distance from A to B 5

b. The coordinates of the midpoint of \overline{AB} $(-1, 5\frac{1}{2})$

c. The slope of the line containing A and B $-\frac{3}{4}$

d. An equation of the line containing A and B . $3x + 4y = 19$

e. Name \overline{AB} as an ordered pair. $(-4, 3)$

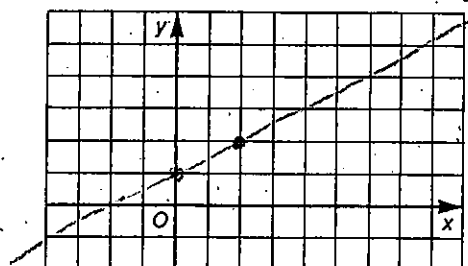
2. Write an equation of the circle with center $(3, -2)$ and radius 8. $(x-3)^2 + (y+2)^2 = 64$

3. Find the center and radius of the circle with equation $x^2 + (y + 4)^2 = 20$.

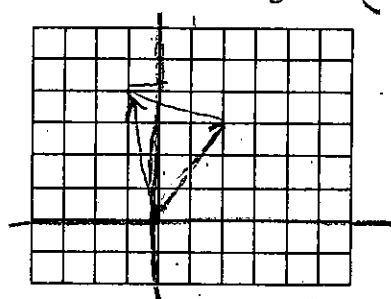
center $(0, -4)$ radius $2\sqrt{5}$

4. Write an equation of the line through $(-1, 4)$ and perpendicular to a line with slope 2. $x + 2y = 7$

5. Graph the line $2y - x = 2$.



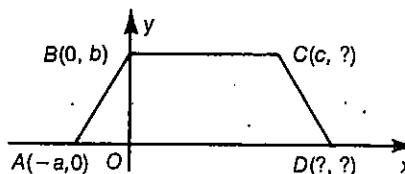
6. Find the vector sum $(2, 3) + (-3, 1)$ and illustrate with a diagram. $(-1, 4)$



7. Find the coordinates of the point of intersection of the lines $3x + y = 7$ and $-x + y = 3$. $(1, 4)$

8. Supply the missing coordinates in isosceles trapezoid $ABCD$ without introducing any new letters.

C _____, D _____



9. Use coordinate geometry to prove that the diagonals of a square bisect each other. First draw a figure and choose convenient axes and coordinates.