Assessment# 1 –Chapter Sections 1.1 to 1.3
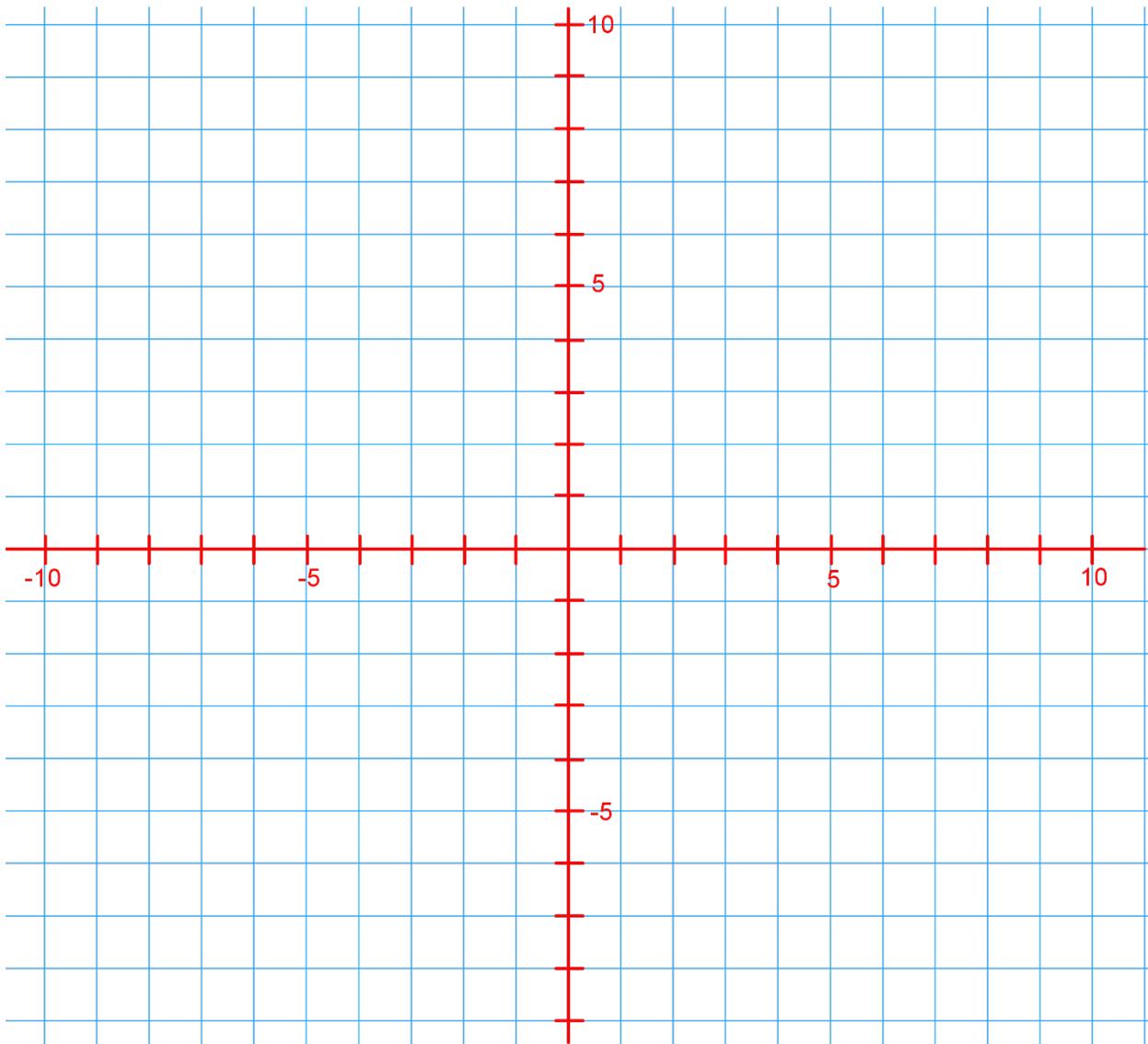
Directions: Provide complete responses to each question.

1.   Sketch the following linear equation: $y = 3x - 2$

2. Find the coordinates of the following points and plot each point:
   a. A point is located six units to the left of the *y*-axis and seven units above the *x*-axis.
   b. A point is located three units to the left of the *y*-axis and two units above the *x*-axis.
   c. A point is located six units to the right of the *y*-axis and eight units below the *x*-axis.
   d. A point is located two units to the right of the *y*-axis and four units below the *x*-axis.
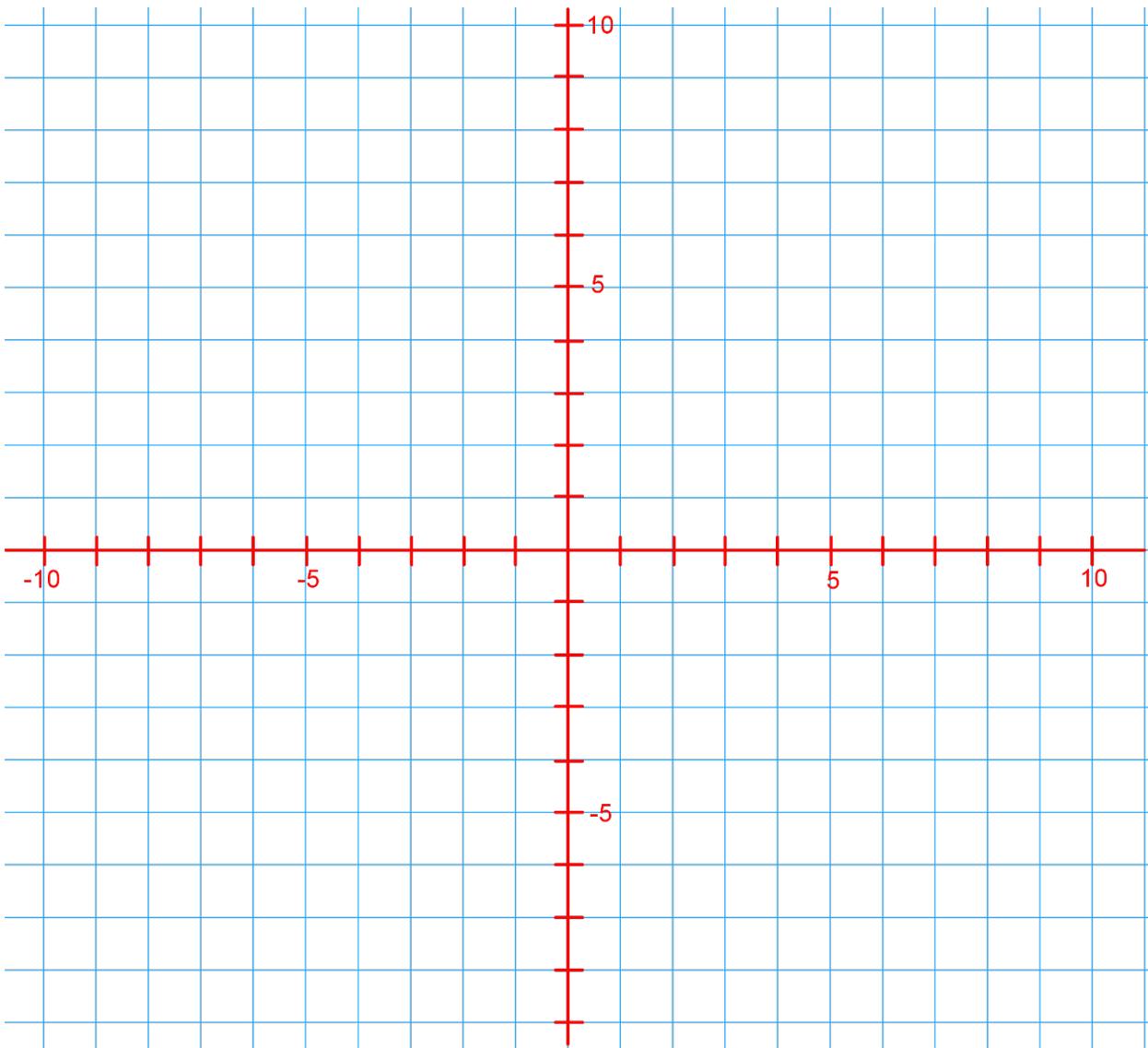
3. Determine the quadrant(s) in which (x, y) is located so that the condition(s) is (are) satisfied.

    a. $x < -10$ and $y < -2$
        Quadrant:

    b. $x < -1$ and $y > 2$
        Quadrant:

    c. $x > 1$ and $y > -2$
        Quadrant:

    d. $x > 2$ and $y < 1$
        Quadrant:

4. . Find the distance and the midpoint for the following points.

    a. $(-4, -1), (-2, 3)$

    b. $(6, -2), (2, 4)$

    c. $(-6, -1), (-1, 6)$

    d. $(5, 4), (4, 5)$

5. The point *A* has coordinates (0, 4). If *A* is moved 3 units upward 6 units to the left; and then moved 5 units downward 4 units to the right, what are the new coordinates of *A*?

6. Use the *intercept form* to find the equation of the line with the given intercepts. The

intercept form of the equation of a line with intercepts $(a, 0)$ and $(0, b)$ is

$$\frac{x}{a} + \frac{y}{b} = 1, a \neq 0, b \neq 0.$$

x-intercept: $(-3, 0)$
y-intercept: $(0, 8)$

7. Find the slope-intercept form of the equation of the line passing through the point:
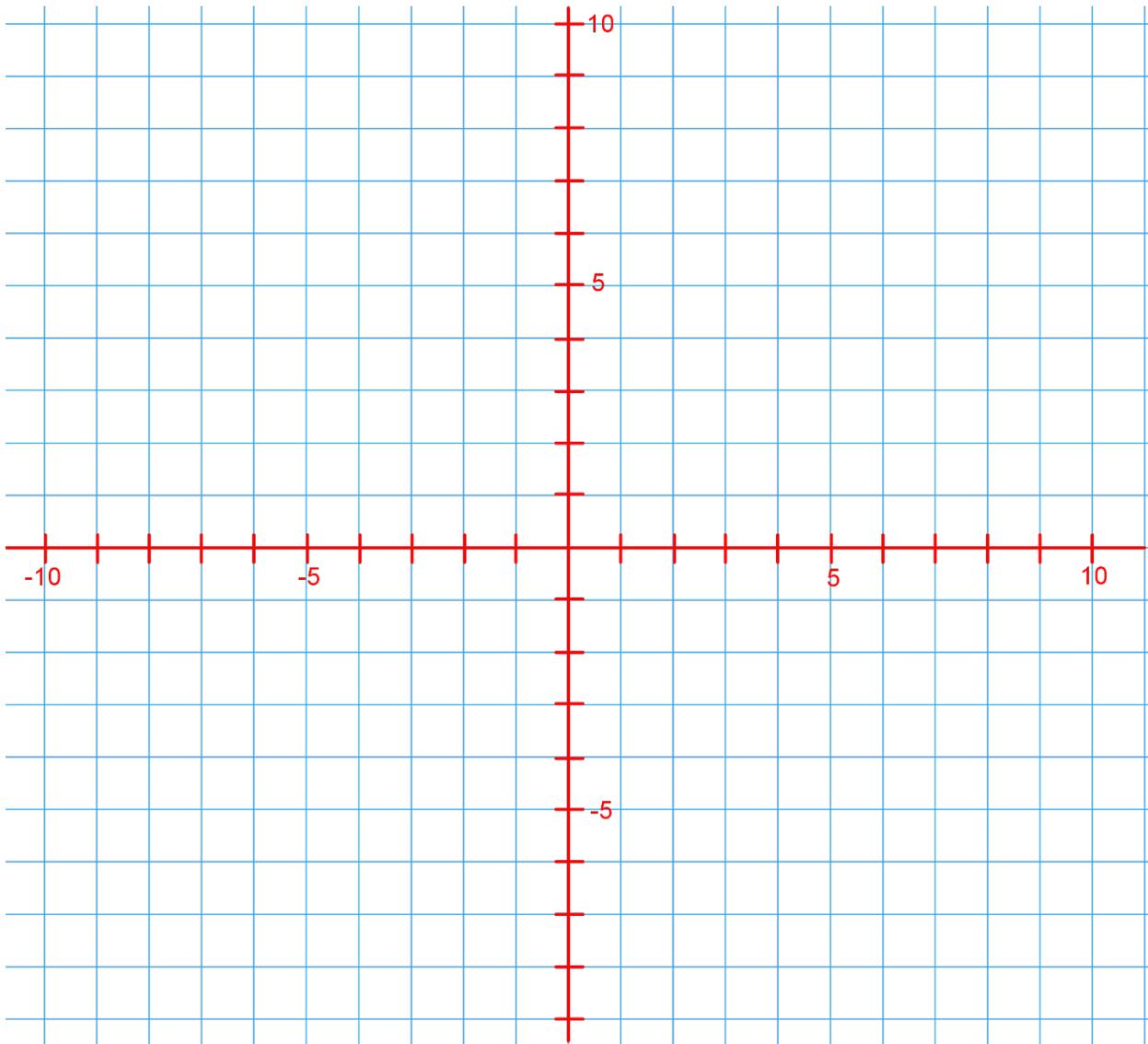$P(6, -2), Q(-6, 6)$

8. Write the standard form of the equation of the circle with the given characteristics:
   Center:(3, 1); Radius: 7

9. Find the center and radius of the circle, and sketch its graph.

$x^2 + y^2 = 16$

10. Write the standard form of the equation of the circle with the given characteristics.

Endpoints of a diameter: (2, 2), (12, 2)