

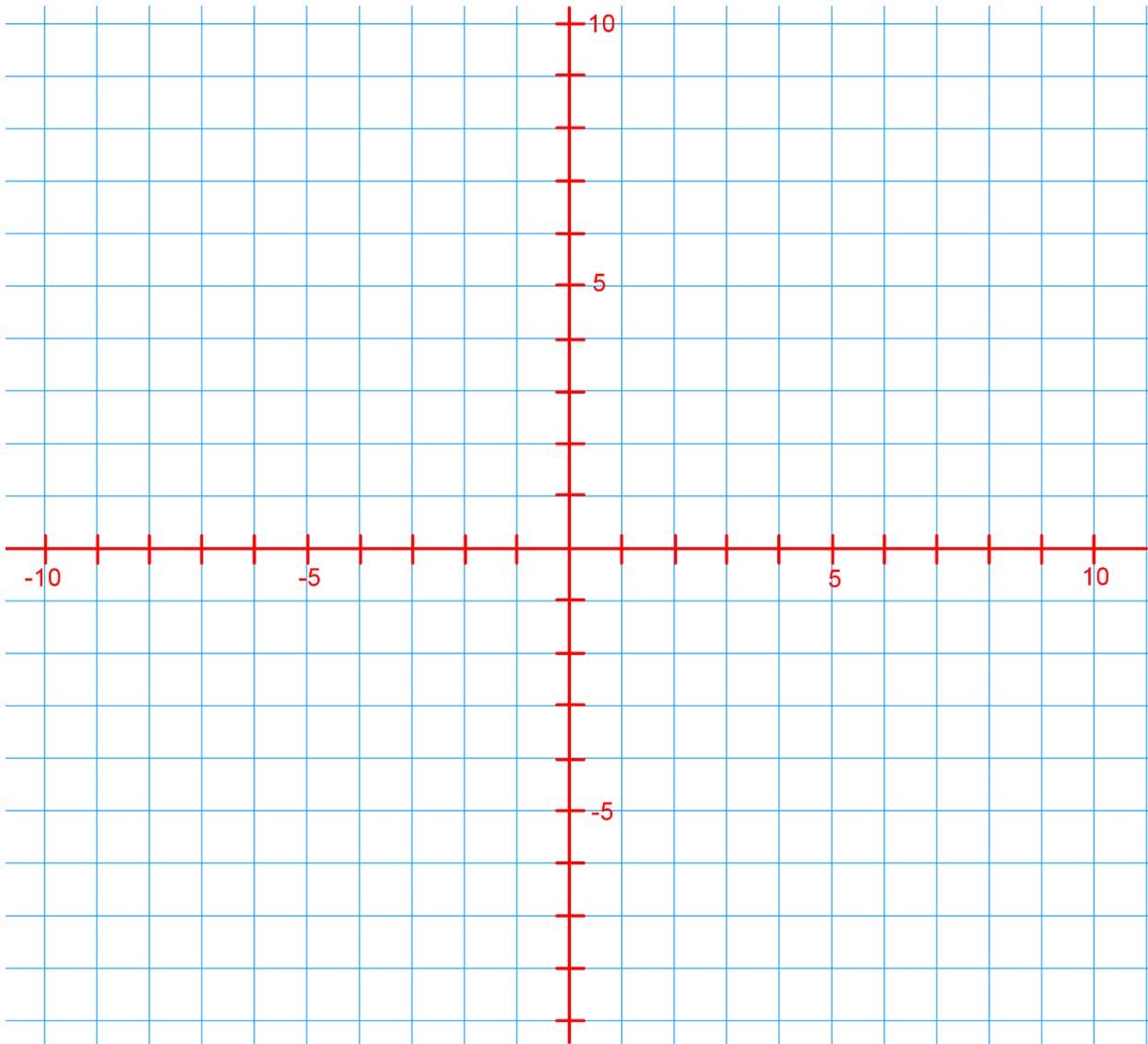
Name
Date

MAT 231
Assessment# 1

Assessment# 1 -Chapter Sections 1.1 to 1.3

Directions: Provide complete responses to each question.

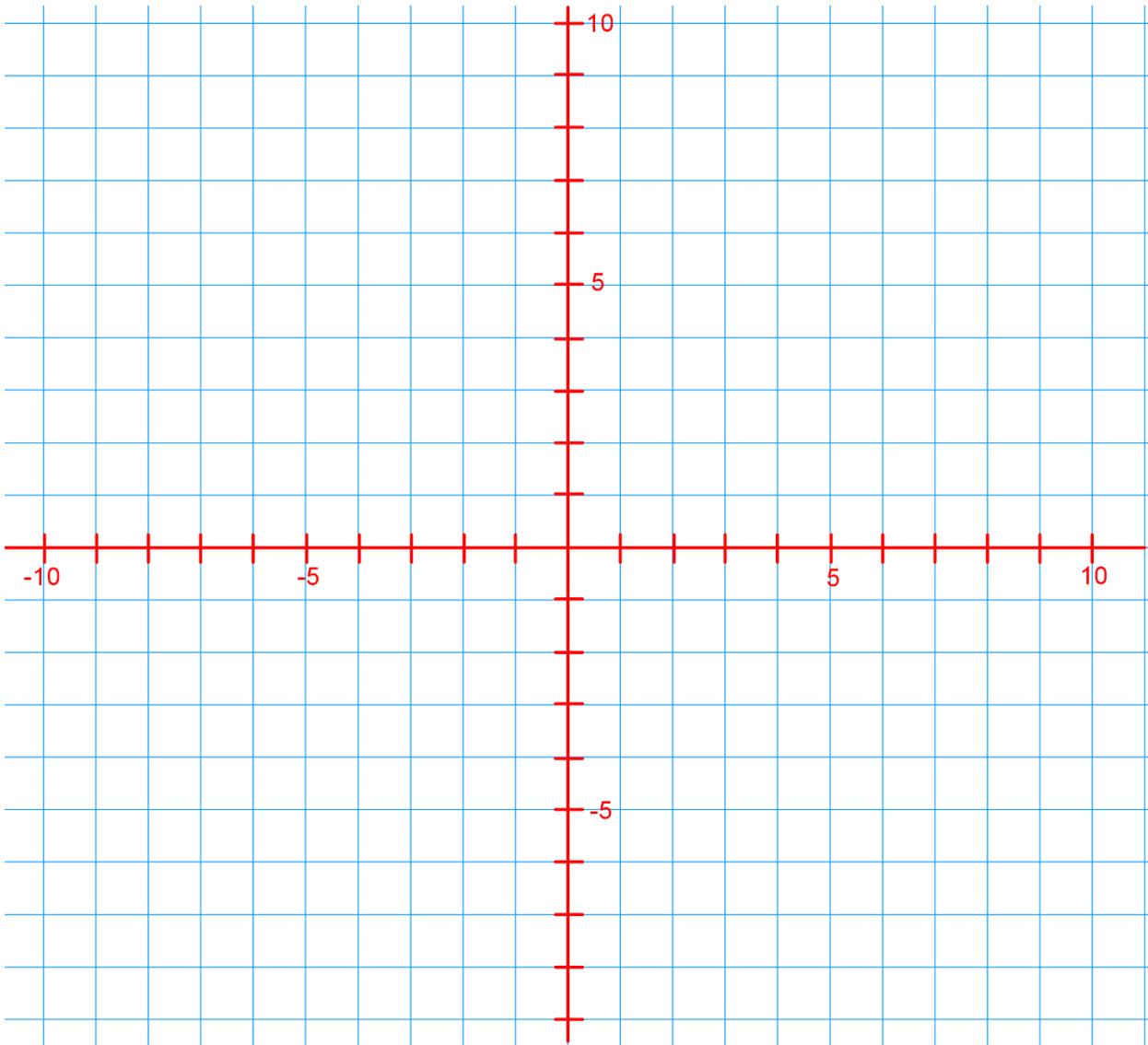
1. Sketch the following linear equation: $y = 3x - 2$



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2. Find the coordinates of the following points and plot each point:
- A point is located six units to the left of the y -axis and seven units above the x -axis.
 - A point is located three units to the left of the y -axis and two units above the x -axis.
 - A point is located six units to the right of the y -axis and eight units below the x -axis.
 - A point is located two units to the right of the y -axis and four units below the x -axis.



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

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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 ?

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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: $(0, 8)$

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

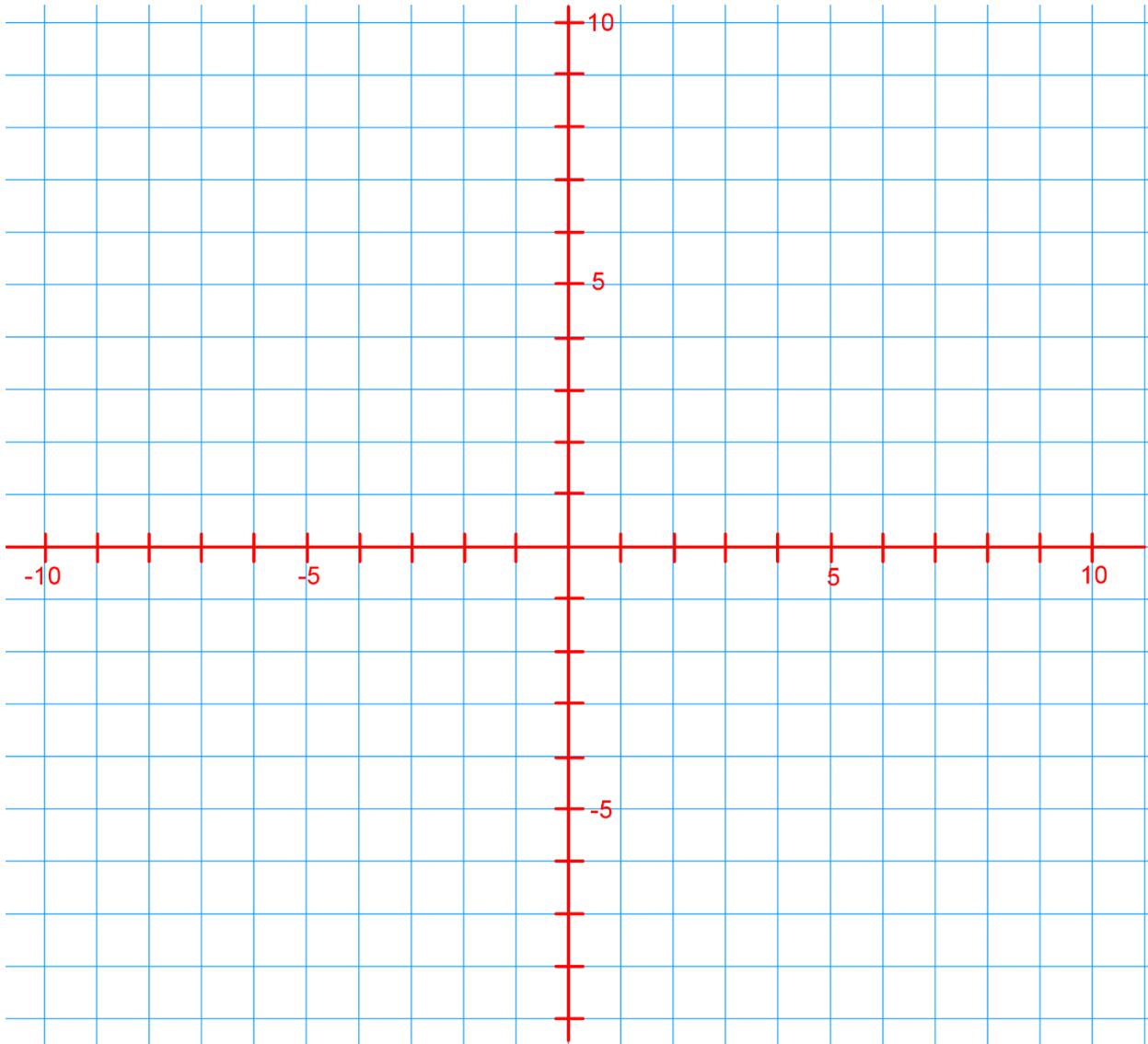
8. Write the standard form of the equation of the circle with the given characteristics:
Center:(3, 1); Radius: 7

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

$$x^2 + y^2 = 16$$



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

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