U1 L2 Graphs of Equations — Practice

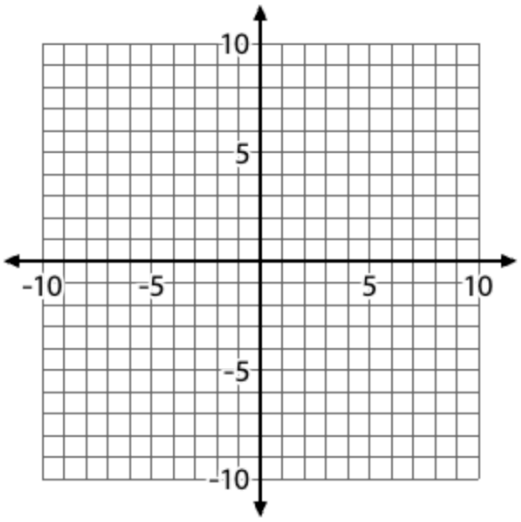
Name: _____ HR: _____

Group A — Sketching Graphs by Plotting Points

Complete each table of values, then plot the solution points on the grid and sketch the graph.

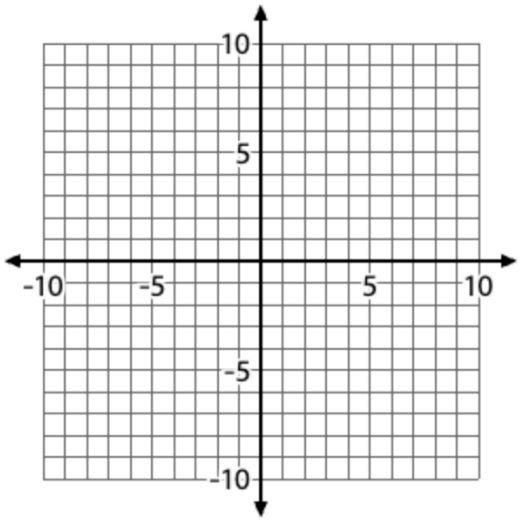
1. $y = 3x - 5$

x:	-1	0	1	2	3
y:					



2. $y = x^2 - 3x$

x:	-1	0	1	2	3	4
y:						



Group B — x- and y-Intercepts

Find the x- and y-intercepts of each equation algebraically. Show your work.

3. $y = 5x - 6$

4. $y = \sqrt{x + 4}$

5. $y = |3x - 7|$

6. $y = 2x^3 - 4x^2$

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Group C — Testing for Symmetry

Use the algebraic tests to check each equation for symmetry with respect to the x-axis, the y-axis, and the origin. One, none, or more than one may apply.

7. $y = x^2$

Symmetric about: _____

8. $x = y^2$

Symmetric about: _____

9. $xy = 4$

Symmetric about: _____

10. $y = x + 1$

Symmetric about: _____

Group D — Writing Equations of Circles

Write the standard-form equation of each circle.

11. Center (0, 0), radius 3

12. Center (−4, 5), radius 2

13. Center (3, 8); the point (−9, 13) lies on the circle. (Hint: use the Distance Formula to find r.)

14. The endpoints of a diameter are (3, 2) and (−9, −8). (Hint: find the center first.)

Group E — Mixed Applications

Show your work.

15. The force F (in pounds) required to stretch a spring x inches from its natural length is modeled by:

$$F = \frac{5}{4}x,\ 0 \le x \le 20$$

Find the force required to stretch the spring 12 inches.

16. A circular sprinkler waters a lawn out to a radius of 15 feet. On a map where the sprinkler sits at the origin, write the standard-form equation of the circle representing the watered area.