 Name _____ Date _____ Per _____

RIDDLE: What is a pirate's favorite part of a circle?

Lesson 9-3 Circles in the Coordinate Plane

Directions: Solve every problem and write your answer on the line. Inside each set, every lettered problem has a twin: one numbered problem with the very same answer. Write the letter in the answer box that has the twin's number to reveal the punchline.

SET 1 9-3a Derive the Equation of a Circle + 9-3b Write the Equation of a Circle

R. A circle has center $C(1, 1)$ and passes through $P(3, -2)$. Find the radius. _____

H. A circle has center $C(6, 4)$ and passes through $P(10, 4)$. Find the radius. _____

R. A circle has center $C(8, 7)$ and passes through $P(5, 6)$. Find the radius. _____

2. A circle has center $C(3, 5)$ and passes through $P(7, 5)$. Find the radius. _____

7. A circle has center $C(3, -3)$ and passes through $P(5, 0)$. Find the radius. _____

8. A circle has center $C(1, 8)$ and passes through $P(4, 7)$. Find the radius. _____

SET 2 9-3c Determine Whether a Point Lies on a Circle + 9-3d Complete the Square to Find the Center and Radius of a Circle

C. Is $(-13, -9)$ on, inside, or outside the circle $x^2 + (y + 4)^2 = 169$? _____

T. A circular garden has edge $x^2 + y^2 + 16x - 10y - 55 = 0$ (units in meters). Find its area in terms of π. _____

R. Is $(0, -5)$ on, inside, or outside the circle $(x + 2)^2 + (y + 9)^2 = 25$? _____

1. A circular garden has edge $x^2 + y^2 - 16x - 10y - 55 = 0$ (units in meters). Find its area in terms of π. _____

6. Is $(3, 8)$ on, inside, or outside the circle $(x - 3)^2 + (y - 4)^2 = 25$? _____

9. Is $(-5, -3)$ on, inside, or outside the circle $x^2 + (y + 6)^2 = 25$? _____

SET 3 9-3e Use the Graph and Equation of a Circle to Solve Problems

R. Find the x-intercepts of $(x - 6)^2 + (y - 6)^2 = 100$. _____

E. Find the x-intercepts of $(x + 3)^2 + (y + 3)^2 = 25$. _____

A. Find the x-intercepts of $(x - 2)^2 + (y - 4)^2 = 25$. _____

3. Find the x-intercepts of $(x + 3)^2 + (y - 3)^2 = 25$. _____

4. Find the x-intercepts of $(x - 2)^2 + (y + 4)^2 = 25$. _____

5. Find the x-intercepts of $(x - 6)^2 + (y + 6)^2 = 100$. _____

ANSWER:

1	2	3		4	5	6	7	8	9	!

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Preview - the full worksheet and its answer key are at primeworksheet.com