

# 12.10

## Equations of a Circle

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Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

### Ready

Find the equation of the following circles:

- Center (0, 0), radius of 6
- Center (1, 2), radius of 3
- Center (-1, -1), radius of 5
- Center of (4, -2), radius of  $\sqrt{50}$

### Set

Place each equation (#5-20) in the corresponding cells of the table below. Make up your own equation for any empty cells.

### Equations:

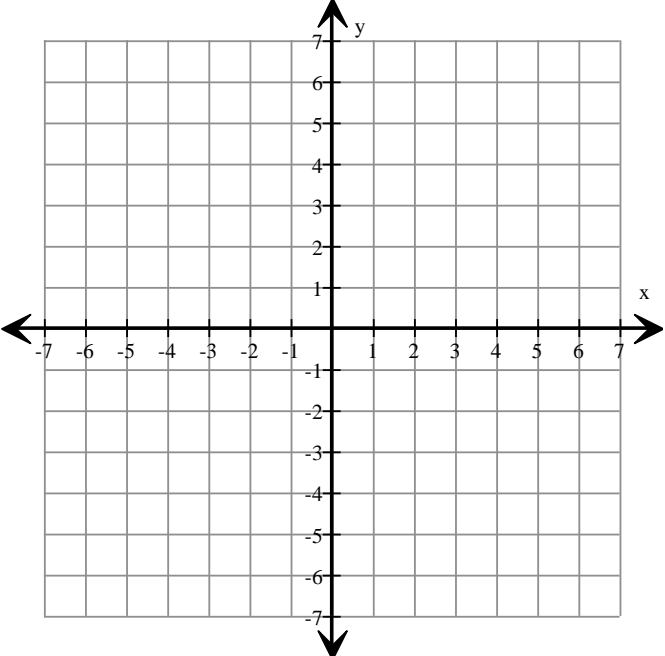
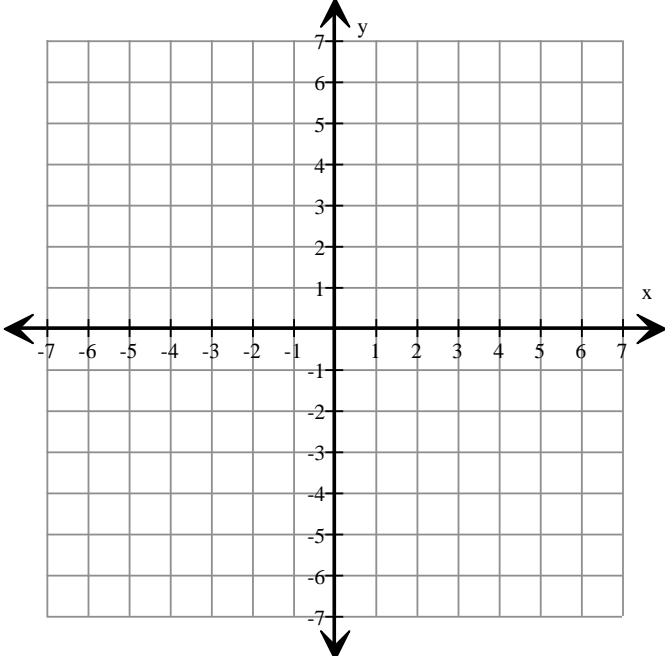
5. $(x - 2)^2 + (y - 1)^2 = 25$	6. $(x + 2)^2 + (y - 1)^2 - 100 = 0$
7. $x^2 + (y + 1)^2 = 25$	8. $(y - 1)^2 + (x - 2)^2 = 5$
9. $(x + 2)^2 + (y - 1)^2 = 10$	10. $x^2 + (y + 1)^2 = 100$
11. $(x - 2)^2 + (y - 1)^2 + 15 = 25$	12. $(x - 2)^2 + (1 + y)^2 = 100$
13. $(y + 1)^2 + x^2 = 10$	14. $(x - 2)^2 + (y + 1)^2 = 10$
15. $(x - 2)^2 + (y + 1)^2 + 4 = 9$	16. $(y - 1)^2 + (x + 2)^2 = 25$
17.	18.
19.	20.

### Categorizing Equations

	Center at (2,1)	Center at (2,-1)	Center at (0,-1)	Center (__, __)
Radius of $\sqrt{5}$				
Radius of $\sqrt{10}$				
Radius of 5				
Radius of 10				

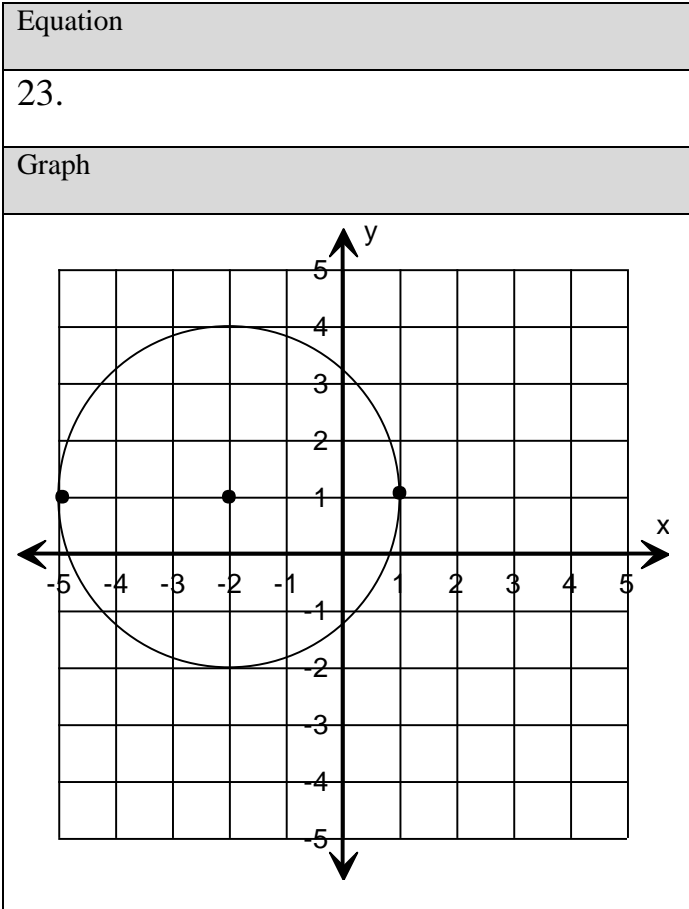
**Go!**

Complete the missing entries in the table.

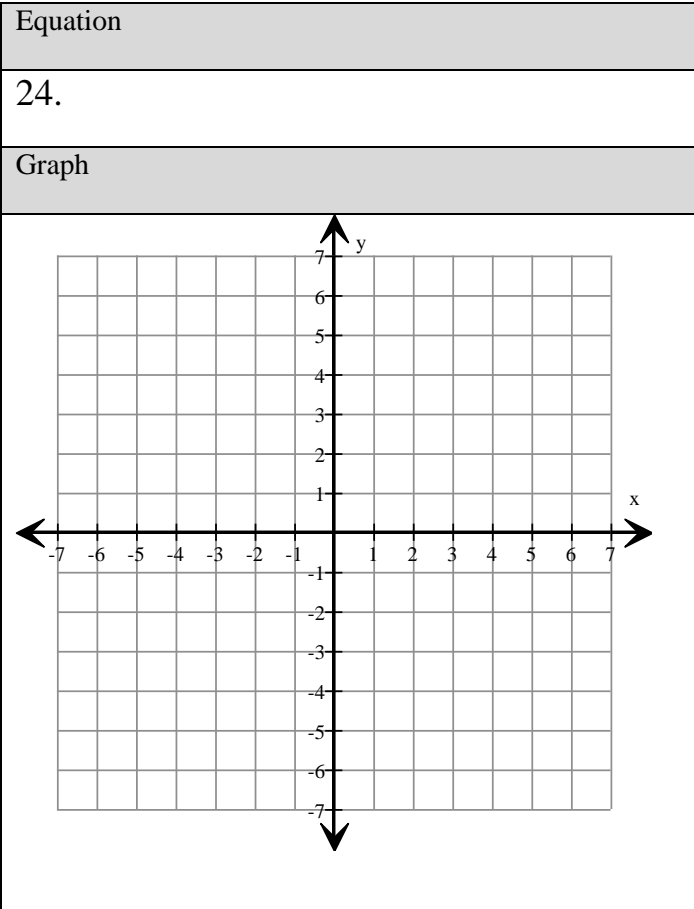
Equation	Equation
21. $x^2 + y^2 = 25$	22.
Graph	Graph
	

Center, Point on Circle
Center (__, __)
Point (__, __)
Three Points on Circle

Center, Point on Circle
Center (0,3)
Point (5,3)
Three Points on Circle



Center, Point on Circle
Center (__, __)
Point (__, __)
Three Points on Circle



Center, Point on Circle
Center (__, __)
Point (__, __)
Three Points on Circle
(7, 8)
(9, 4)
(-1, 4)