Name _____

12-8B **Lesson Master**

SKILLS Objective D

In 1–6, solve for all, if any, real solutions by hand.

1. $\begin{cases} y = 4x \\ y = 2x^2 \end{cases}$ _____

2. $\begin{cases} ab = -12 \\ 3a - b = 0 \end{cases}$ _____

3. $\begin{cases} y = x^2 \\ 2x + 3y = 12 \end{cases}$ _____

4. $\begin{cases} y = 2x^2 + 1 \\ 2x + y = 1 \end{cases}$ _____

5. $\begin{cases} y = v^2 + 9 \\ y = \frac{1}{4}v \end{cases}$ _____

6. $\begin{cases} x + y = 1 \\ x^2 + y^2 = 1 \end{cases}$ _____

In 7–10, a. estimate solutions to the system by graphing on a graphing utility, and b. find the exact solutions.

7. $\begin{cases} xy = 169 \\ 3x + 4y - 91 = 0 \end{cases}$

8. $\begin{cases} y - x = 20 \\ x^2 + y^2 = 200 \end{cases}$

a. _____   a. _____

b. _____   b. _____

9. $\begin{cases} y = 2x^2 - 1 \\ \frac{2}{3}x + y - \frac{1}{3} = 0 \end{cases}$

10. $\begin{cases} (x - 1)^2 + (y + 6)^2 = 8 \\ 2x - y - 6 = 0 \end{cases}$

a. _____   a. _____

b. _____   b. _____

Name

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USES Objective H

11. A rectangular picture has an area of 300 in^2 and perimeter of 80 in. Find its dimensions.
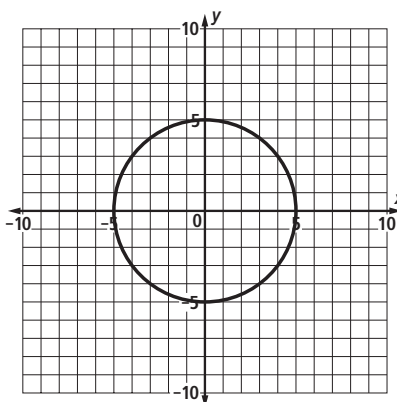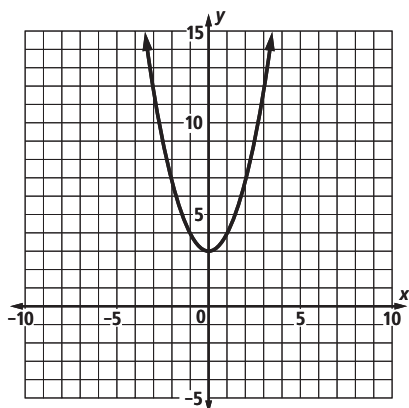

REPRESENTATIONS Objective K

12. Find two real numbers whose product is 2800 and sum is 110.

In 13–16, draw a line that intersects the given graph as indicated. Give the equation of the line.

13. The line intersects the graph of $y = x^2 + 3$ twice.

14. The line intersects the graph of $x^2 + y^2 = 25$ once.

15. The line intersects the graph of $16x^2 + 9y^2 = 144$ twice.

16. The line intersects the graph of $xy = 50$ zero times.