Name_____ Date _____

4.3 Practice A

In Exercises 1–3, determine the number of real solutions of the equation. Then solve the equation using square roots.

1. $x^2 = 36$
2. $x^2 = -16$
3. $x^2 = 0$

In Exercises 4–12, solve the equation using square roots.

4. $x^2 - 9 = 0$
5. $x^2 + 8 = 0$
6. $2x^2 + 10 = 0$

7. $x^2 - 24 = 40$
8. $2x^2 - 72 = 0$
9. $-x^2 + 25 = 25$

10. $(x - 4)^2 = 0$
11. $(x + 2)^2 = 9$
12. $(3x + 1)^2 = 49$

In Exercises 13–15, solve the equation using square roots. Round your solutions to the nearest hundredth.

13. $x^2 + 5 = 11$
14. $x^2 - 8 = 10$
15. $3x^2 - 1 = 14$

16. Describe and correct the error in solving the equation $x^2 - 9 = 16$ using square roots.

$$x^2 - 9 = 16$$
$$x - 3 = 4$$
$$x = 7$$

17. A rectangular box has a height of 7 centimeters and a volume of 336 cubic centimeters. The length of the box is three times the width.

   a. Write an equation describing this situation.

   b. Find the length and width of the box.

18. Without graphing, where do the graphs of $y = x^2$ and $y = 25$ intersect? Explain.

19. Without graphing, where do the graphs of $y = x^2$ and $y = 1.21$ intersect? Explain.