Name _____ Date _____

Practice Set 10.1

Solving Quadratic Equations by the Square Root Property

Solve each quadratic equation by the square root property. If possible, simplify radicals or rationalize denominators.

1. $x^2 = 64$ 1. _____

2. $x^2 = 121$ 2. _____

3. $x^2 = 17$ 3. _____

4. $5x^2 = 45$ 4. _____

5. $16y^2 = 49$ 5. _____

6. $2x^2 - 1 = 49$ 6. _____

7. $2x^2 - 7 = 0$ 7. _____

8. $(x-4)^2 = 81$ 8. _____

9. $(x+1)^2 = 1$ 9. _____

10. $(x-7)^2 = 24$ 10. _____

Solve each quadratic equation by first factoring the perfect square trinomial on the left side. Then apply the square root property. Simplify radicals, if possible.

11. $x^2 - 4x + 4 = 9$ 11. _____

12. $x^2 + 10x + 25 = 8$ 12. _____

Name _____ Date _____

13. $x^2 - 6x + 9 = 7$ 13. _____

14. $x^2 + 2x + 1 = 20$ 14. _____

Use the Pythagorean Theorem to find the missing side of the triangle with the lengths of the other two sides given. Express the answer in radical form and simplify, if possible.

15. a = 3 meters b = 4 meters c = ? 15. _____

16. a = ? b = 12 ft. c = 13 ft. 16. _____

17. a = 12 in. b = ? c = 20 in. 17. _____

18. One leg 6 inches; hypotenuse 10 inches. Find the other leg. 18. _____

19. One leg 5 meters; hypotenuse 10 meters. Find the other leg. 19. _____

Find the distance between each pair of points. Express answer in simplest radical form.

20. (2, 5)(–3, 6) 20. _____

21. (1, 4)(–1, 8) 21. _____

22. (0, 7)(5, –2) 22. _____

23. (3, 4)(–1, 3) 23. _____

24. (0, –2)(1, –4) 24. _____

25. (–5, –2)(1, –3) 25. _____