

## 5.1 Solve by Square Roots

Date \_\_\_\_\_ Period \_\_\_\_\_

**Solve each equation by taking square roots.**

1)  $x^2 = 64$

2)  $b^2 = 81$

3)  $m^2 = 52$

4)  $n^2 = 7$

5)  $r^2 = 49$

6)  $-8a^2 = -296$

7)  $v^2 - 5 = -11$

8)  $3k^2 = -54$

9)  $3n^2 = -18$

10)  $3p^2 + 9 = 60$

11)  $64r^2 - 5 = 20$

12)  $7m^2 - 9 = 439$

$$13) 9n^2 + 9 = 459$$

$$14) 3(x - 2)^2 + 3 = 45$$

$$15) 2(x + 4)^2 - 4 = 20$$

$$16) (x - 8)^2 - 6 = 50$$

$$17) 5(x - 5)^2 + 5 = 100$$

$$18) 2(x - 4)^2 + 6 = 80$$

**Simplify.**

$$19) (3 - 4i) + (2 + 3i)$$

$$20) (4 - 7i) + (-12 - 2i)$$

$$21) (4 - 7i) - (-1 - i)$$

$$22) (-5 - 10i) - (-1 - 2i)$$

**Factor each completely.**

$$23) 25m^2 - 16$$

$$24) m^2 - 1$$

**Solve each equation by factoring.**

25)  $x^2 = -x$

**Simplify.**

26)  $\sqrt{512n^2}$

27)  $3\sqrt{54} - 2\sqrt{6} - 3\sqrt{24}$

28)  $2\sqrt{10}(-4\sqrt{6} - 5\sqrt{2})$

**Simplify. Your answer should contain only positive exponents.**

29)  $3b^4 \cdot 2b$

30)  $r \cdot 2r^{-2}$