

## Solving Equations with Complex Roots (ALG.CN.12)

Solve each equation by factoring.

1.  $x^2 + 36 = 0$

2.  $3x^2 - 375 = 0$

3.  $5x^2 = -80$

4.  $3x^3 = -135x$

5.  $49x^2 + 16 = 0$

6.  $363x^2 + 3 = 0$

7.  $\sqrt{7}x^4 + \sqrt{175}x^2 = 0$

8.  $x^4 - 81 = 0$

Use the quadratic formula to solve each equation.

9.  $x^2 - 4x + 13 = 0$

10.  $x^2 + 10x + 26 = 0$

11.  $x^2 + 22x + 125 = 0$

12.  $x^2 - 14x + 69 = 0$

13.  $x^2 + 2\sqrt{2}x + 7 = 0$

14.  $x^2 - 2\sqrt{6}x + 26 = 0$

15.  $9x^2 + 12x + 7 = 0$

16.  $4x^2 - 28x + 58 = 0$

17.  $x^2 - 2ax + (a^2 + b^2) = 0$

18.  $x^2 + 2\sqrt{3}x + (4y^2 + 3) = 0$