

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

1. Solve each equation.

a.  $0 = x^2 - 7x - 18$

b.  $x^2 + 10x = 39$

c.  $0 = x^2 - 10x + 12$

d.  $2x^2 + 4x = 0$

e.  $3x^2 - 22x + 7 = 0$

2. Determine the roots of the equation  $y = x^2 + 9x + 3$ . Check your solutions.

4. Determine the roots of the equation  $y = 3x^2 + 24x - 6$ . Check your solutions.

5. Determine the roots and the location of the vertex of  $y = x^2 + 20x + 36$ .