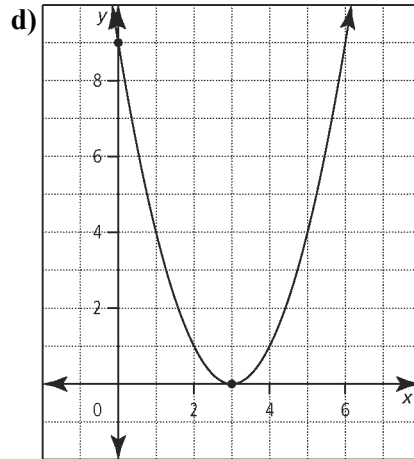
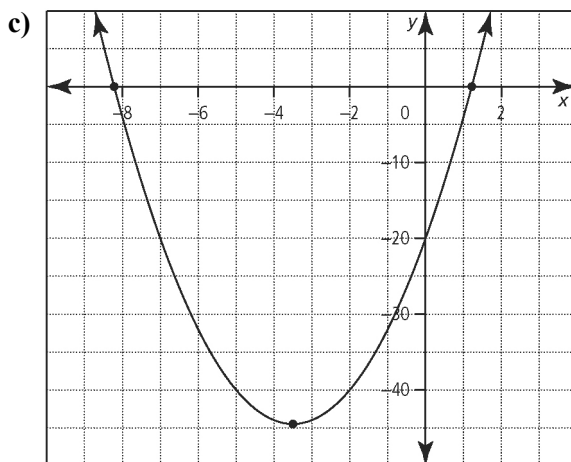
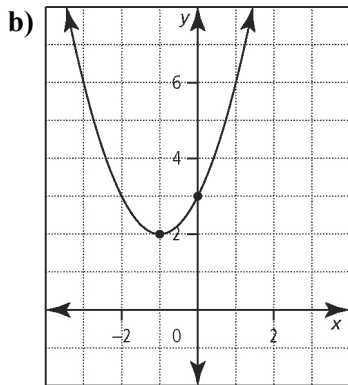
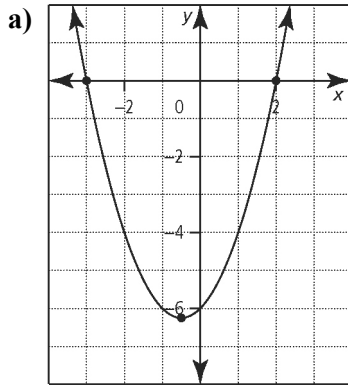


Section 4.1 Extra Practice

1. How many x -intercepts does the graph of each quadratic function have?



2. What are the roots of the quadratic equations graphed in #1?
3. Solve by graphing.
- $0 = -a^2 - 3a - 4$
 - $12 = -3b^2 - 12b$
 - $6c^2 + 30c = 0$
 - $d^2 - 4 = 0$
4. Determine the roots for each quadratic equation. Where integral roots cannot be found, estimate the roots to the nearest tenth.
- $0 = x^2 + 2.4x - 3.85$
 - $z^2 - 15 = 0$
 - $t^2 + t = -1$
 - $0 = -u^2 - u + 5$
5. Solve by graphing.
- $t^2 - 5t - 150 = 0$
 - $h^2 - 400 = 0$
 - $0 = x^2 + 0.6x - 0.05$
 - $5y^2 + 3y + 100 = 0$



Name: _____

Date: _____

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(continued)

6. For what values of m would the equation $x^2 + 8x + m = 0$ have
- a) one real root or two equal real roots?
 - b) two real distinct roots?
 - c) no real roots?
7. An object is launched at 21.5 m/s from a height of 2.4 m. The equation for the object's height, h , measured in metres, t seconds after launch is $h = -4.9t^2 + 21.5t + 2.4$. After how many seconds will the object hit the ground? Express your answer to the nearest tenth of a second.
8. A right triangle has one side that is 7 cm longer than its shortest side. The triangle's hypotenuse is 8 cm longer than the shortest side. What are the dimensions of the triangle?

