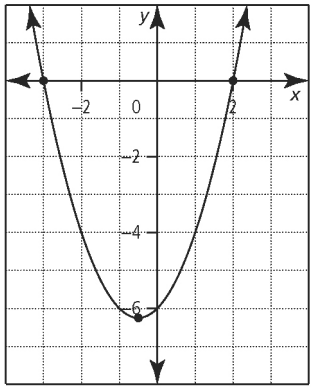
Name: _____ Date: _____

BLM 4–4

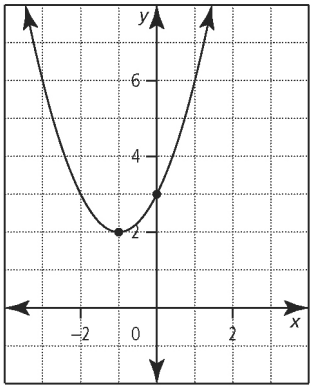
Section 4.1 Extra Practice

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

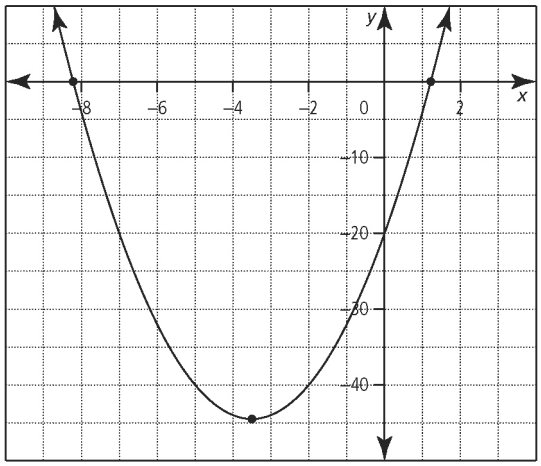
a)



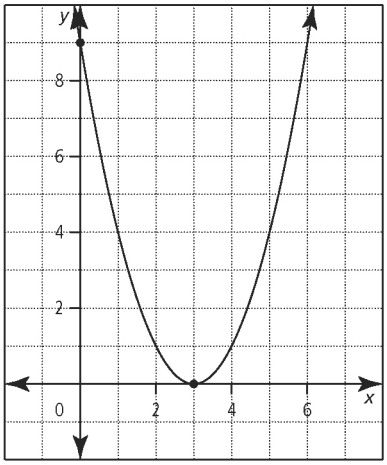
b)



c)



d)



2. What are the roots of the quadratic equations graphed in #1?

3. Solve by graphing.

a) $0 = -a^2 - 3a - 4$

b) $12 = -3b^2 - 12b$

c) $6c^2 + 30c = 0$

d) $d^2 - 4 = 0$

4. Determine the roots for each quadratic equation. Where integral roots cannot be found, estimate the roots to the nearest tenth.

a) $0 = x^2 + 2.4x - 3.85$

b) $z^2 - 15 = 0$

c) $t^2 + t = -1$

d) $0 = -u^2 - u + 5$

5. Solve by graphing.

a) $t^2 - 5t - 150 = 0$

b) $h^2 - 400 = 0$

c) $0 = x^2 + 0.6x - 0.05$

d) $5y^2 + 3y + 100 = 0$

Name: _____ Date: _____

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?