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

**Quadratic Applications – Building and Solving Functions**

1. You drop a ball off a cliff at 500 ft. How long does it take the ball to hit the ground? 

1. You launched a model rocket with an initial speed of 88 feet per second. After how many seconds will the rocket be 120 feet high? 

A ball is thrown into the air from a height of 256 feet at time t = 0. The function that models this situation is , where *t* is measured in seconds and *h* is the height in feet.

1. What is the height of the ball after 4 seconds?
2. When will the ball reach a height of 144 feet?
3. When will the ball hit the ground?

Solve each quadratic equation using the best method.

1. 
2. 
3. 
4. 
5. 
6. 