

**General Algebra 2 Worksheet #1 Unit 9 page 1 \_\_\_\_\_**

A steel ball is propelled upward from a point that is 224 feet above the ground. Its height,  $h$  (in feet), above the ground after  $t$  seconds is given by the function  $h(t) = -16t^2 + 80t + 224$ , where  $t \geq 0$ . Use this equation to answer the following questions.

**1. How high above the ground will the ball be after 3 seconds?**

**2. How high above the ground will the ball be after 6 seconds?**

**3. When will the ball be 288 feet above the ground?**

**4. When will the ball again be 224 feet above the ground?**

**5. When will the ball be 100 feet above the ground?**

## General Algebra 2 Worksheet #1 Unit 9 page 2

A steel ball is propelled upward from a point that is 224 feet above the ground. Its height,  $h$  (in feet), above the ground after  $t$  seconds is given by the function  $h(t) = -16t^2 + 80t + 224$ , where  $t \geq 0$ . Use this equation to answer the following questions.

6. When will the ball hit the ground?

7. What is the maximum height that the ball will reach. How long did it take the ball to reach its maximum height?

8. Sketch a graph of this function from  $t = 0$  until the ball hits the ground.

