

Algebra II Class Worksheet #1 Unit 8 page 1 _____

A steel ball is propelled upward from a point that is 500 feet above the ground with an initial velocity of 160 feet per second. The function $h = -16t^2 + 160t + 500$ expresses the height of the ball, in feet, as a function of the time, t , in seconds.

1. What is the height of the ball after 2 seconds?

2. What is the height of the ball after 6 seconds?

3. When will the ball be 644 feet above the ground?

4. When will the ball again be 500 feet above the ground?

5. When will the ball be 400 feet above the ground?

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A steel ball is propelled upward from a point that is 500 feet above the ground with an initial velocity of 160 feet per second. The function $h = -16t^2 + 160t + 500$ expresses the height of the ball, in feet, as a function of the time, t , in seconds.

6. When will the ball hit the ground?

7. What is the maximum height reached by the ball? 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.

