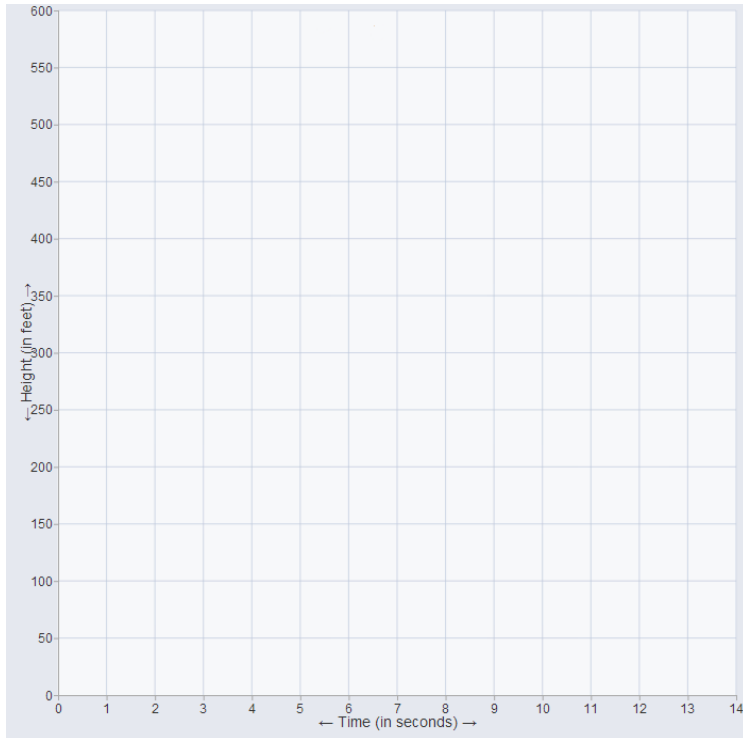


Name \_\_\_\_\_  
Date \_\_\_\_\_

Quadratic Word Problems Part 1  
Check-In Worksheet

A model rocket is launched from ground level. The height of the rocket, in feet, at time  $t$ , in seconds, can be modeled using the equation  $h(t) = -16t^2 + 192t$ . Ignore air resistance to answer the following questions.

1. Graph the parabola for the given scenario.



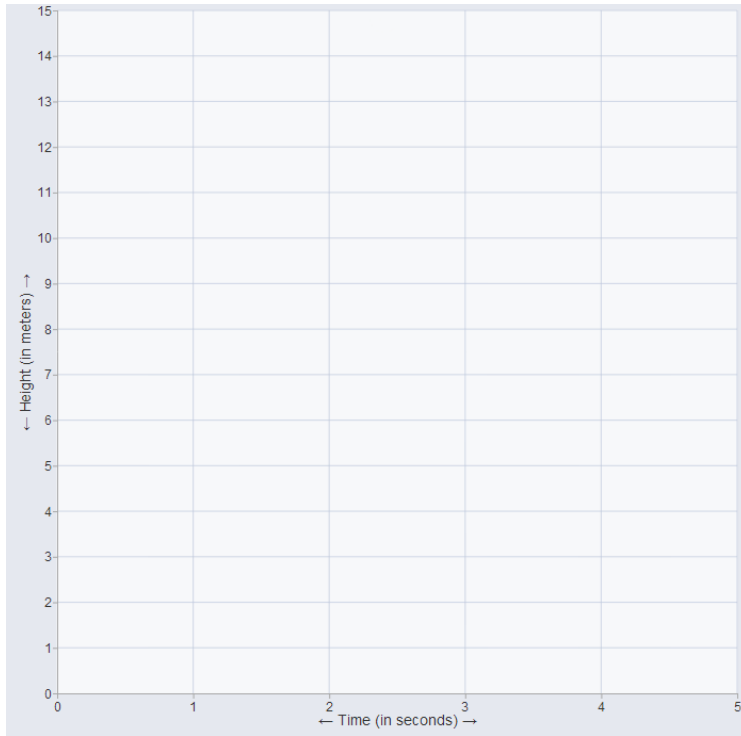
2. What time does the model rocket reach its peak height?

3. What is the peak height of the model rocket?

4. How long does it take the model rocket to hit the ground after it has been in the air?

A soccer ball is kicked in the air from ground level. The height, in meters, of the ball at time  $t$ , in seconds, can be modeled using the equation  $h(t) = -4.9t^2 + 14.7t$ . Ignore air resistance to answer the following questions.

5. Graph the parabola for the given scenario.



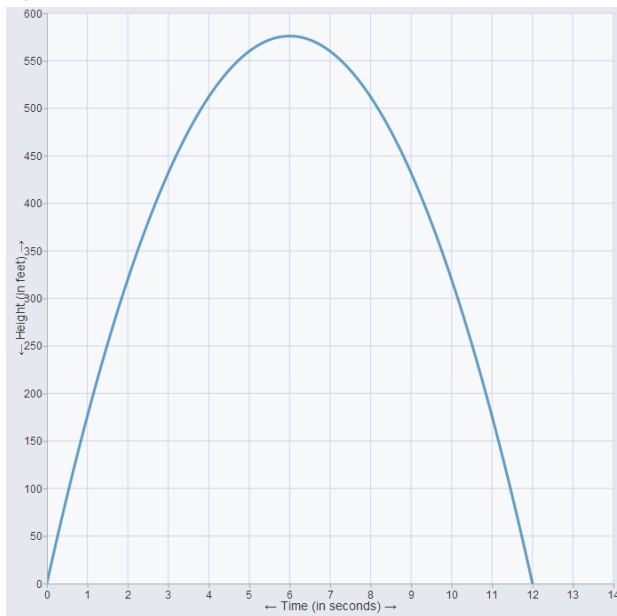
6. What time does the soccer ball reach its peak height?

7. What is the peak height of the soccer ball?

8. How long does it take the soccer ball to hit the ground after it has been in the air?

Answers:

1.

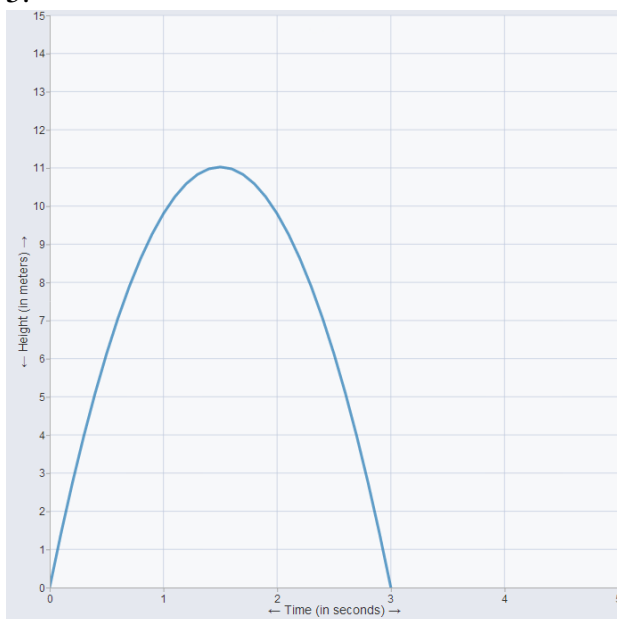


2. 6 seconds

3. 576 feet

4. 12 seconds

5.



6. 1.5 seconds

7. 11.025 meters

8. 3 seconds