



Problem 1 – Introduction to Parametric Equations

Read the problem on page 1.4.

1. What value for gravity is used for this problem? Explain your reasoning.

2. Write parametric equations to model the motion of the ball.

$$x(t) =$$

$$y(t) =$$

3. Using the graph and/or table page, determine the approximate maximum height reached by the ball.

4. Determine the approximate horizontal distance traveled by the ball.

5. About how much time elapsed between the ball being hit and landing on the ground?

Problem 2 – Parametric to Quadratic

Read the problem on page 2.2 and look at the equations on page 2.3.

6. Write the quadratic equation that models the motion of a golf ball. Round all decimals to four places.

7. About how far will the ball travel horizontally before landing?

8. About how long will it take for the ball to hit the ground?

9. What is the approximate maximum height reached by the golf ball?

10. Will the ball clear a 4 meter high fence that is in the path of the ball 150 meters from the golfer? *Draw a sketch of the graph to illustrate this situation and explain how you arrived at your answer.*