1. The height of a ball in feet x seconds after it is thrown is given by $f(x) = -16x^2 + 32x + 5$.

     a. When will the ball reach the ground?

     b. When will the ball reach a height of 7 feet?

2. The fuel economy in miles per gallon of a certain vehicle is given by $f(x) = -0.01x^2 + 1.2x – 5.8$, where x is the car's speed in miles per hour. For what speed(s) does the car have a fuel economy of 22 miles per gallon?

3. A foul ball leaves the end of a baseball bat and travels according to the formula $h(t) = -16t^2 + 64t$ is the height of the ball in feet and t is the time in seconds.

       a. Find the maximum height reached by the ball.

       b. Determine when the foul ball will hit the ground.

       c. Determine when the ball will be 48 feet high in the air.