

Math 99 Worksheet #6

May 25, 2007

- Two cars left an intersection at the same time. One traveled south and the other traveled east. After a certain amount of time, the eastbound car has traveled 14 miles further than the southbound car. How far has each car traveled if the distance between them was 4 miles more than the distance the east bound car has traveled?
- A ball is thrown downward from the top of a 180-foot building with an initial velocity of 24 feet per second. The height of the ball in feet after t seconds is given by $h = -16t^2 - 20t + 180$.
 - What is the height of the ball after 1 second?
 - How long does it take for the ball to strike the ground? (Round to the nearest tenth of a second.)
 - When will the ball be 90 feet from the ground? (Round to the nearest tenth of a second.)
- Graph the following parabolas and state the domain, range, and vertex for each graph.
 - $f(x) = -x^2 + 2$
 - $g(x) = (x + 1)^2$
 - $h(x) = (x - 3)^2 - 1$