MATHEMATICS 120E
QUIZ 1

You may use a scientific calculator to complete this quiz. No notes please.

1. A ten-foot ladder rests against a vertical wall. Let $x$ be the distance between the bottom of the ladder and the wall. Let $y$ be the distance between the top of the ladder and the ground.

   (a) If the bottom of the ladder is 5 feet from the wall, how far from the ground is the top of the ladder?

   (b) Suppose the bottom of the ladder is 5 feet from the wall and begins to slide away from the wall at a rate of 1 foot per second.

      i. Give an expression for $x$ after $t$ seconds.
ii. Give an expression for $y$ after $t$ seconds.

iii. When will the top of the ladder hit the floor?

2. Find the equation of the line through the points $(7, 22)$ and $(10, 5)$. 