

# Math 124 Worksheet #10

November 2, 2007

1. Suppose a forest fire spreads in a circle with radius increasing at a rate of 5 feet per minute. When the radius reaches 200 feet, at what rate is the area of the burning region increasing?
2. A plane is flying at an elevation of 4 miles over an observer. If the plane is flying at a constant speed of 450 mph, how fast is the distance between the observer and the plane changing when the distance between the plane and observer is 10 miles?

3. A fish is reeled in at a rate of 1 foot per second from a point 10 feet above the water (See figure). At what rate is the angle between the line and the water changing when there is a total of 25 feet of line out?

