

Math 184

Quiz 2

Assume that oil spilled from a ruptured tanker spreads in a circular pattern whose radius increase at a constant rate of 2 ft/sec. How fast is the area of the spill increasing when the radius of the spill is 60 ft?

Suppose that a liquid is to be cleared of sediment by pouring it through a cone-shaped filter. Assume that the height of the cone is 16 in. and the radius at the base of the cone is 4 in. If the liquid is flowing out of the cone at a rate of 2 in³/min when the level is 8 in. deep, how fast is the depth of the liquid changing at that instant?

