Quiz 9 **Name:** _____
Week 12: 04/07/2020
Math 285: Spring 2020
Instructor: Garrett Hartshaw

Instructions:
Please answer the questions below. Show all your work. You may use a TI-84/85 (or equivalent) calculator.

Problem 1. (20 points) A cone-shaped container (with point facing down) is being filled with water. The container has a height of 10 ft and the top has a radius of 5 ft. How fast is the water level rising when it is filled to a height of 3 ft if water is being poured in at a rate of 20 ft^3/min? (Hint: the volume of a cone is $V = \frac{1}{3}\pi r^2 h$, where r is the radius of the base and h is the height.)