Related Rates

1. The radius of a spherical ball is decreasing at a constant rate of 3 inches per minute. In terms of area A, what is the rate of change of the volume of the sphere as a function of A, in cubic inches per minute?

2. Water runs into a conical tank at a rate of 12 ft^3/min. The tanks stands point down, and has a height of 14 ft and a base radius of 7 ft. How fast is the water level rising when the water is 4 ft deep?