

Chapter 4.6: Related Rates

Calculus I

College of the Atlantic. Fall 2014

1. A 3-meter ladder stands against a high wall. The foot of the ladder moves outward at a speed of 0.1 m/s when the foot is 1 meter from the wall. At that moment, how fast is the top of the ladder falling?

2. A hemispherical bowl of radius 10 cm contains water to a depth of h cm.
 - (a) Find an expression for the radius of the surface of the water as a function of h .

 - (b) The water level drops at a rate of 0.1 cm per hour. At what rate is the radius of the water decreasing when the depth is 5 cm?