

BAE 103
Energy in Biological Systems

Quiz No. 1 - Supplemental
Concepts of Volumes, Surface Areas Related Rates
Date: Wednesday, February 7

Name: _____

1. A rectangular greenhouse measures 210 feet in length by 20 meters in width. What is the floor area of the greenhouse in acres?
2. Water flows from a hose at with an average velocity of 12 ft/s. The cross-sectional area of this hose is 10 cm^2 . If this hose is used to flood the floor of the greenhouse (Problem 1) to a depth 5.0 cm, how long (hours) will it take?
3. The owner of an above ground fuel storage tank wants to paint the tank. A gallon of paint covers 250 ft^2 . If the rectangular tank is 7.5 ft wide by 3.75 m long by 5.0 ft in height, how many gallons of paint should be purchased to paint the entire exterior of the tank?