Homework 16

Name: Date: August 10, 2015

P 1. An open tank has the shape of a right circular cone. The tank is 20 feet across the top and 8 feet high. The cone is filled with olive oil
(Mass density of olive oil: http://www.wolframalpha.com/input/?i=mass+density+of+olive+oil).
Note that you'll need to convert this to lbs/ft^3. How much work is done in emptying the tank by pumping the oil over the top edge?

P 2 (28)**.** Consider a 20-foot chain that weighs 3 pounds per foot hanging from a winch 20 feet above ground level. Find the work done by the winch in winding up the entire chain with a 1000-pound load attached to it.