Applied Math 40S Name: _____

Design and Measurement Hand-In Assignment 1
Unit Conversions

Complete the following questions in the spaces provided. Round to ***2 decimal places*** when necessary. Show all work to arrive at an answer. Hand in this assignment when finished.

Due date: _____

1. Perform the following conversions:

a) 185 cm to m

b) 39.5 in to ft

c) 2.35 yd to ft

d) 1.88 mi to ft

e) 7599 cm^2 to m^2

f) 5.4 m^2 to cm^2

g) 6.72 ft^2 to in^2

h) 113 ft^2 to yd^2

i) 338 in^3 to ft^3

j) 0.32 km^3 to m^3

k) 73 ft^3 to yd^3

l) 837 in^3 to yd^3

2. You are digging a cylindrical hole to hold a swimming pool. The diameter of the hole has to be 20 feet, and the depth of the hole needs to be 5 feet.
   a) Calculate the number of cubic feet of dirt that need to be removed to create the hole.

   b) The person with the equipment to dig the hole needs to know how many cubic yards of dirt need to be removed. Convert your answer from part a) to cubic yards.

3. You are volunteering this holiday season to wrap presents for kids in the hospital. Each child is going to receive a toy that is in a box. The box is a perfect cube that measures 50 cm on each side.

   a) Calculate the amount of wrapping paper in square centimetres that is needed to wrap one present.

   b) There are 100 presents that need to be wrapped. How much wrapping paper (in cm^2) is needed to wrap all 100 presents?

   c) One roll of wrapping paper covers 5 m^2. How many rolls would need to be purchased to wrap all of the presents?