

# Homework 1

Due January 13

Do the following problems from the textbook:

**Section 4.7:** 26, 30 (Hint: it may be useful to think of tangent as measuring the ratio opposite/adjacent), 54, 60(b)

**Section 4.4:** 12, 16, 25, 55, 72

**Section 4.9:** 30, 34, 42, 54 (Assume  $F(0) = 0$ ), 76

and also do the following problem:

**A.** A company makes cylindrical barrels for nuclear waste. The bottom and top of the barrel are two times thicker than the sides to prevent nuclear waste from leaking out. If a barrel must hold  $32\pi$  cubic feet of nuclear waste, what should the dimensions of this barrel be to minimize the amount of material used to make it?

**E.C** For extra credit, you can do number 70 from section 4.7.