1. We want to construct a rectangular box with a volume of 24 cubic feet of minimal cost. The material for the top costs $12 per square foot, the four sides cost $8 per square foot, and the bottom costs $12 per square foot. To the nearest cent, what is the minimum cost for such a box?

(a) Set up the cost as a function of length, width, and height
(b) Reduce this to an equation in two of the variables
(c) Find the minimum cost

NOTE: In the 10:30am section, I changed a few of the numbers (the top cost 9$ per square foot and the bottom cost $15 per square foot), but the final answer is the same