

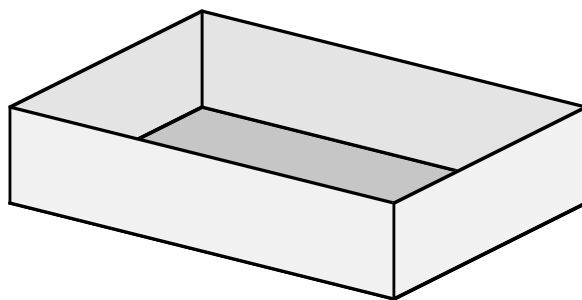
Quiz #7: An Optimization Problem**GOAL:**

Your in this quiz is to work in pairs or groups of three to build a container that will hold the maximum possible mass of candy (without using ridiculous amounts of tape and without crushing the candy).

The container must be constructed from a cardboard square measuring 6 inches by 6 inches. The container must have a bottom – you must be able to pick up the filled container and not have the candy fall out. The candy cannot be “stacked up.” Each piece of candy has to fit completely inside the container. You have to keep the candy wrapped.

HELPFUL INFORMATION:

The volume of a box that resembles:



is given by length times width times height.

GRADING:

When all of the groups have finished their measurements, calculations and construction, each container will be filled with candy and weighed. Your grade will be determined by the actual mass of your filled container. The formula that will be used to calculate your score on the group part of the quiz is as follows:

$$\text{Score} = \frac{\text{Your mass}}{\text{Largest mass}} \times \frac{10}{1}.$$

This score will be rounded to the nearest whole number and that whole number is the number of points that each member of your group will receive.