

Lab: Determining Buoyant force on a stack of steel washers

(note: use the back side to take notes on buoyancy and significant figures)

First consider the stack of washers in front of you. (3-4).

Use the space at right to draw the stack at an oblique angle.

Use your ruler to measure the relevant dimensions **to determine the volume of the stack.**

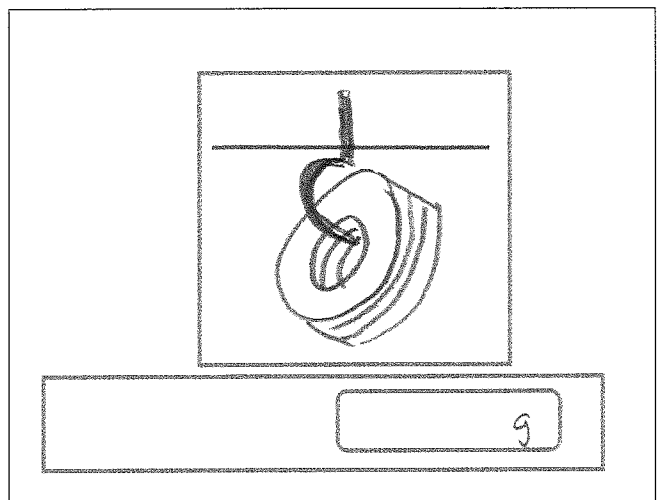
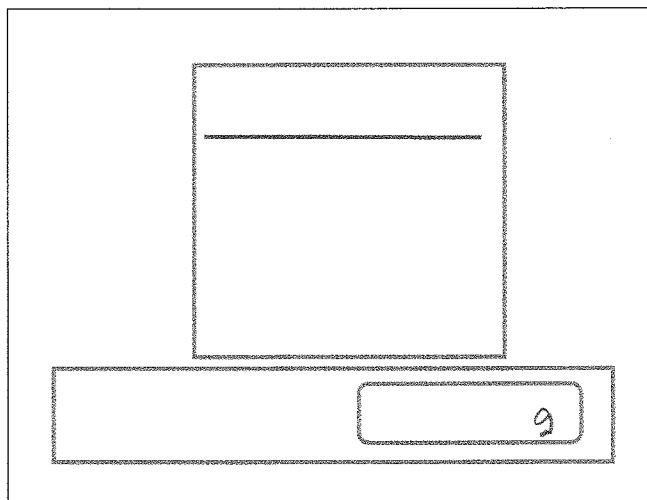
For each dimensional measurement and calculation, be sure to use correct significant figures

The Volume of the stack of washers = _____ cm³

Use the scale to measure the mass of the washers = _____ grams

Now Determine the DENSITY of the steel washers = _____ g/cm³

Fill an aluminum cup about 80% full with water and place it on your digital scale as shown.



Now slowly lower the pack of washer into the water, without letting them touch the bottom.

How does the scale's reading change?

Did you expect it to change? If so, by how much did you expect it to change? If not, why not?

What do you suppose the 'change in weight' represents?

Use the difference in weight to calculate your percent error for your volume calculation.