

Name: \_\_\_\_\_

## SNC1L Forensic Chemistry – Lab #2



# Are These The Real Goods?

Now that you have figured out that Rover will be just fine after the robbery, the Windsor police have another task for you. They found a bag of items that look like some of the ones stolen from the robbed house. However, the house owners are claiming they are **fakes** – not the real items. Calculate the density of the objects to help the police determine if these are the real items or not.

For insurance purposes the family had previously had the density of their “precious” goods calculated.

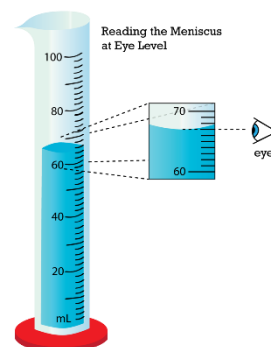
Item # & Description	Appraised Density (from police tag)	Mass (g)	Volume (mL)	Actual Density density = mass ÷ volume

### Materials:

- Overflow can & beaker
- Recovered items (1 at a time please)
- Graduated cylinder
- Scale (to be shared by all)

### Procedure:

1. **Mass** an object on the scale
2. Fill the **overflow can** until some water comes out the spout in the beaker.
3. Empty the beaker.
4. Put the item in the overflow can, make sure it is under water. Let water come out into beaker.
5. Pour water from beaker into graduated cylinder
6. **Measure** the amount of water and record as volume
7. **Calculate** density
8. Repeat for 3 more recovered items



### Questions:

1. Did any of the items match the density description from the insurance company?
2. What should the police do now? **WHY?**