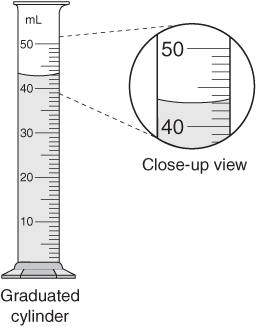
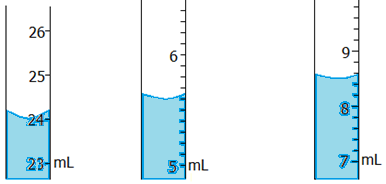
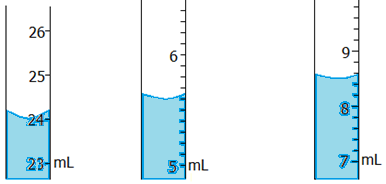
Chemistry September 2017 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due:

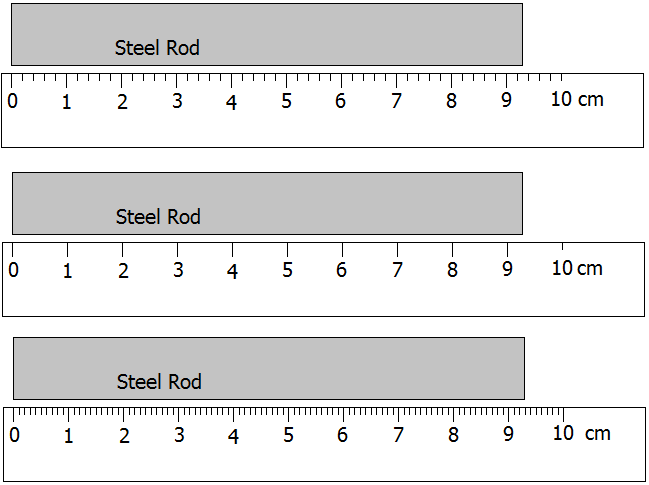
**WS1 Uncertainties Worksheet V1**

1. Determine the measurements shown on each of the graduated cylinders shown below. Indicate the absolute uncertainty and units with each measurement.

a)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ c) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Determine the length of each steel rod shown below. Indicate the absolute uncertainty and units with each measurement.

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a)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ c) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

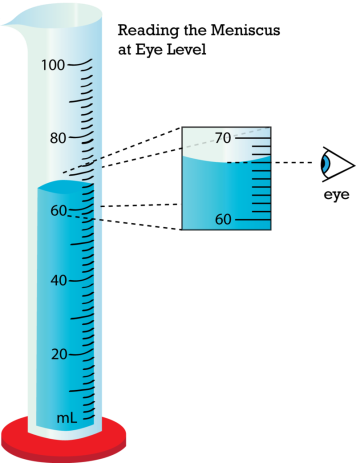
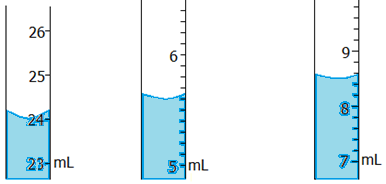
3. An irregular object is placed into a graduated cylinder that contains (54.3±0.5)mL of water. The water level appears to rise to (86.6±0.5)mL. How much water does the object displace? Include units and uncertainties in you final answer. Show your work.

Final Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Chemistry September 2017 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Due:

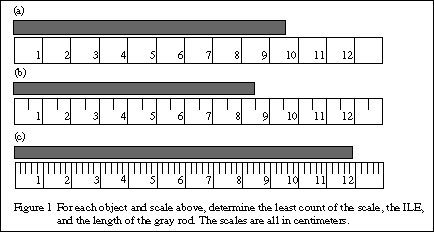
**WS1 Uncertainties Worksheet V2**

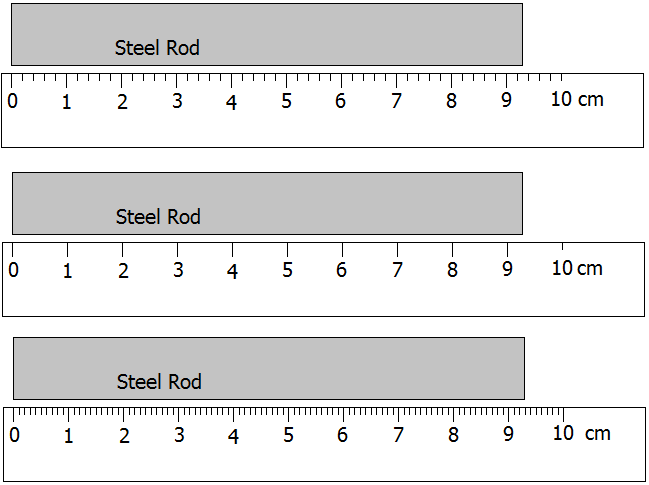
Determine the measurements shown on each of the graduated cylinders shown below. Indicate the absolute uncertainty and units with each measurement.

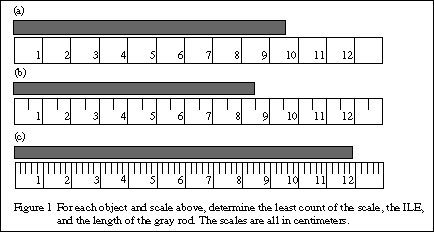
 

a)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ c) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Determine the length of each steel rod shown below. Indicate the absolute uncertainty and units with each measurement. (Rulers "a" and "c" are 12 cm long.)



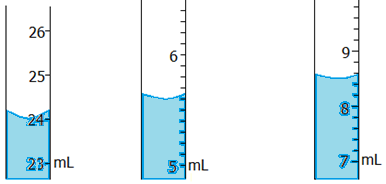
b)



a)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ b) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ c) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. An irregular object is placed into a graduated cylinder that contains (54.3±0.5)mL of water. The water level appears to rise to (86.6±0.5)mL. How much water does the object displace? Include units and uncertainties in you final answer. Show your work.

Final Answer: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

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