

Name:

Period:

PRE-LAB 3 – METRIC LINEAR MEASUREMENT

Background

Much of what we do in science class will be based on our quantitative observations (the observations we make that use measurements of one kind or another). It is important for us to be accurate in our measurements, otherwise we risk introducing too much error into our results.

Objective

- 1) To practice accurately measuring linear distances in order to reduce error.

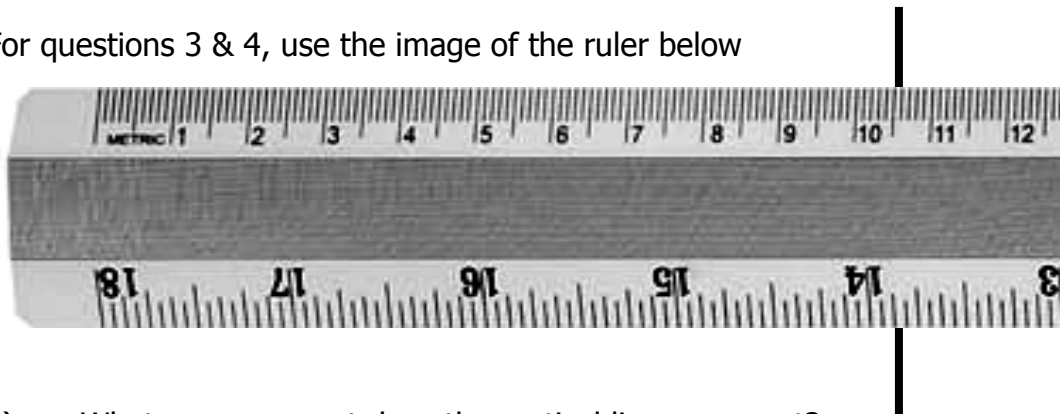
Materials

- Metric ruler
- Meter stick
- Pencil
- Textbook

Procedure

- 1) Read page R17 in your textbook.
- 2) On a standard metric ruler, what measurement does each number typically represent?

For questions 3 & 4, use the image of the ruler below



- 3) What measurement does the vertical line represent?
- 4) Notice the space at the edge of the ruler before the measuring lines (gradations) begin? How do you think this space might affect your measurements? What should you do to make sure that your measurements are accurate when using a ruler like this?
- 5) How many small lines are in between each larger line on a metric ruler?

6) Use your ruler to measure the following lines. Record your answers in Table P3-1 below.

a



b



c



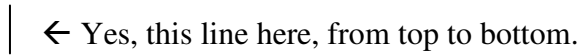
d



e



f



Now measure the following items. Record your answers in Table P3-2 below.

- The width of this piece of paper to the nearest 0.1cm.
- The height of the textbook to the nearest 0.1cm.
- The thickness of the textbook to the nearest mm.
- The height of the lab station countertops to the nearest cm.
- The distance between your thumb and pinky when your fingers are spread out as far as possible.

Line	Length (in millimeters)	Length (in centimeters)
a		
b		
c		
d		
e		
f		

Object	Length