Name_____ Period _____ Date_____
(First Name Last Name) (MM/DD/YY)

What is a meter? A decimeter? A centimeter?

Making Measurement (60pts)

Using whole meters: Measure the item at each station and record in the table below. Add them to class table as well.

You've received a strip of paper that is 1 meter in length.

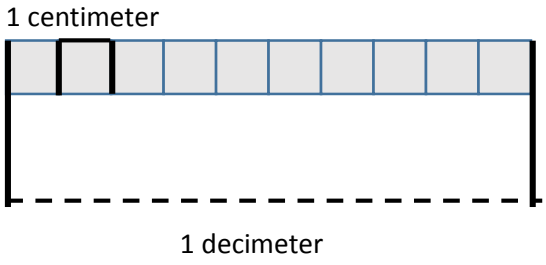
Station	Measure	meters	decimeters	centimeters
A	Length of classroom			
B	Height of door handle			
C	Height of lab table			
D	Height of counters			
E	Height of tallest classroom stool			
	Height of shortest classroom stool			
F	Height of textbook			
G	Length of Pencil			
H	Length of Paperclip			

Making more precise measurements using decimeters:

Break your meter tape into 10 equal parts (Use your centimeter squares. 1 decimeter is 10 centimeters long). Each of these is a called a decimeter. How many decimeters is each object? Record in the table and the class table.

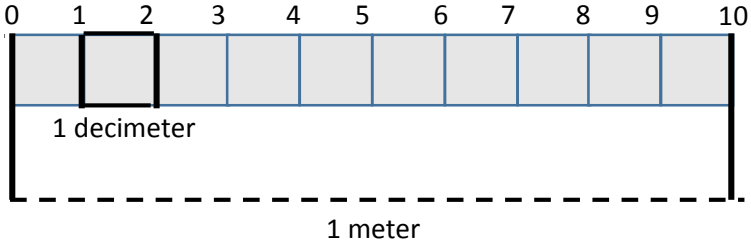
Marking 1 decimeter using 10 centimeters

(Use a 10 centimeter strip to mark the decimeters)



10 decimeters marked on the 1 meter strip

(Your strip should look like this after marking all the decimeters)

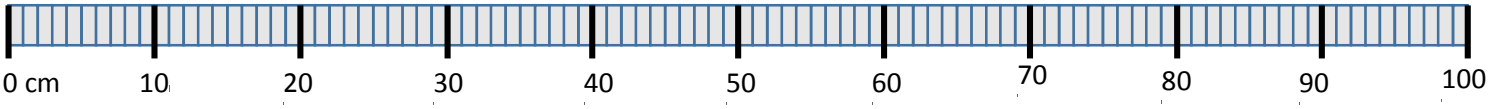


Making even more precise measurements using centimeters:

Break each of your decimeters into 10 centimeters. Cut a strip of 10 centimeter squares from your sheet and glue them down. Record in the table and the classroom table.

100 centimeters marked on the 1 meter strip

(Your strip should look like this after marking all the centiimeters)



What are significant figures? (20pts)

Any number used in a calculation should contain only figures that are considered reliable; otherwise, time and effort are wasted. Figures that are considered reliable are called **significant figures**. In a measurement, significant figures in a number:

Numbers definitely known + One estimated number

In class you will hear this expressed as "all of the digits known for certain plus one that is a guess."

Example: I measured the length of the N-hall using my meter strip, before I marked the decimeters or centimeters. The hall was 15 meters long plus a little more. There was a bit of hall way left over that was part of a meter but not a whole meter long. It was about half my meter strip long. So I knew for sure the hall way was 15 meters and I guessed the left over part was half a meter. I put that the hall way was 15.5m long put in my data table. I couldn't put 15.5643567m because those extra numbers don't mean anything because I couldn't reliably measure anything smaller than half a meter.

How long was the classroom? _____

When measuring the classroom in meters, how many whole meters did you measure? _____

What part of your measurement did you guess about? Describe, in at least 1 complete sentence, how you guessed the length of the partial meter?

_____

_____

How long was the classroom when you measured in decimeters? _____

Did you guess about any part of the measurement? _____

Describe, in at least 1 complete sentence, how guessing about the partial decimeter was different than guessing about the partial meter?

_____

Write the decimeters in meters by dividing the measurement in decimeters by 10:

$$\frac{\_\_\_\_\_ decimeters}{10} = \_\_\_\_\_ m$$

Does this measurement have more less or the same amount of significant digits than your first measurement in whole meters? _____

Write a paragraph: Describing why it helps to break your meter into smaller units and why it is useful to break each unit into 10 smaller units. (1 opening sentence, 2 to 3 body sentences, 1 closing sentence) 20pts: