Concept: An Introduction to Measurement

Name:

COMPUTER COMPONENT

Instructions: In UMATH X follow the **Content Menu** path:

Measurement and Geometry > An Introduction to Measurement

Work through all Sub Lessons of the following Lessons **in order**:

- *Measurement in the News*
- *A Glimpse Into The Past*
- *All Distance Activities*
- *All Metric and US Measurement Systems*
- *All Conversions*
- *Benchmarks*
- *Rudy's Run*

As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal.

OFF COMPUTER EXERCISES

1. In our daily lives, sometimes measurement can be estimated, and at other times it must be very accurate. A list of locations where long-jump might be measured is shown below.

1. Track & Field World Championships
2. Back yard
3. School Track Meet

Circle the list which shows the locations in order from the greatest to the least need for accuracy?

A. 3, 2, 1

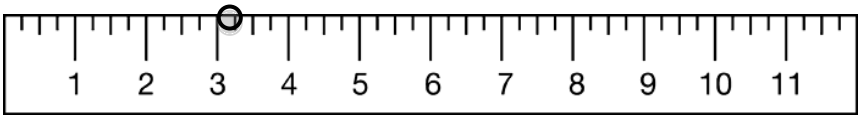
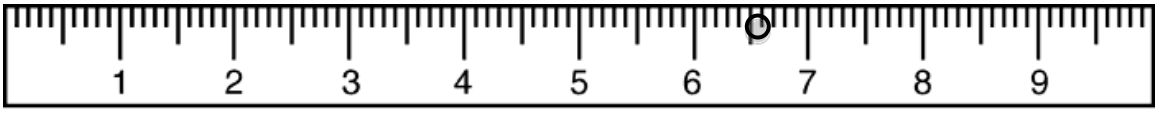
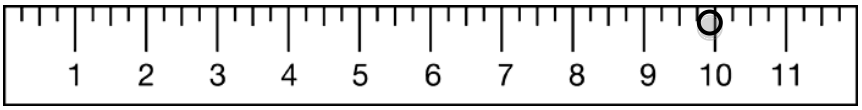
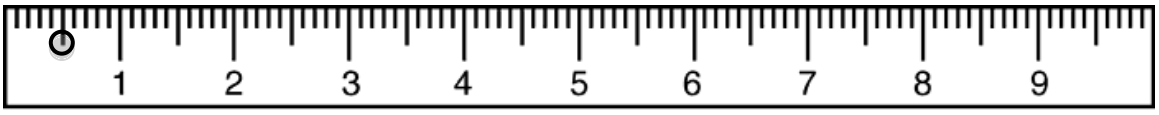
B. 3, 1, 2

C. 1, 2, 3

D. 1, 3, 2

2. In order for you to measure a distance accurately, you must be able to master the use of your measuring tools.

Circle the given measurement on each ruler.

Mark	Ruler
3.25 in	
6.5 cm	
9.75 in	
0.5cm	

3. Use your knowledge of scale to help calculate the size of the following objects. Be sure to show all of your work.

Hint: First, use your ruler to measure the object. Then, take this value and multiply it by the scale. (For example: 1cm = 5 m ∴ A 5cm measurement : 5 × 5 = 25 m)

(a)

Scale- 1in = 5 ft

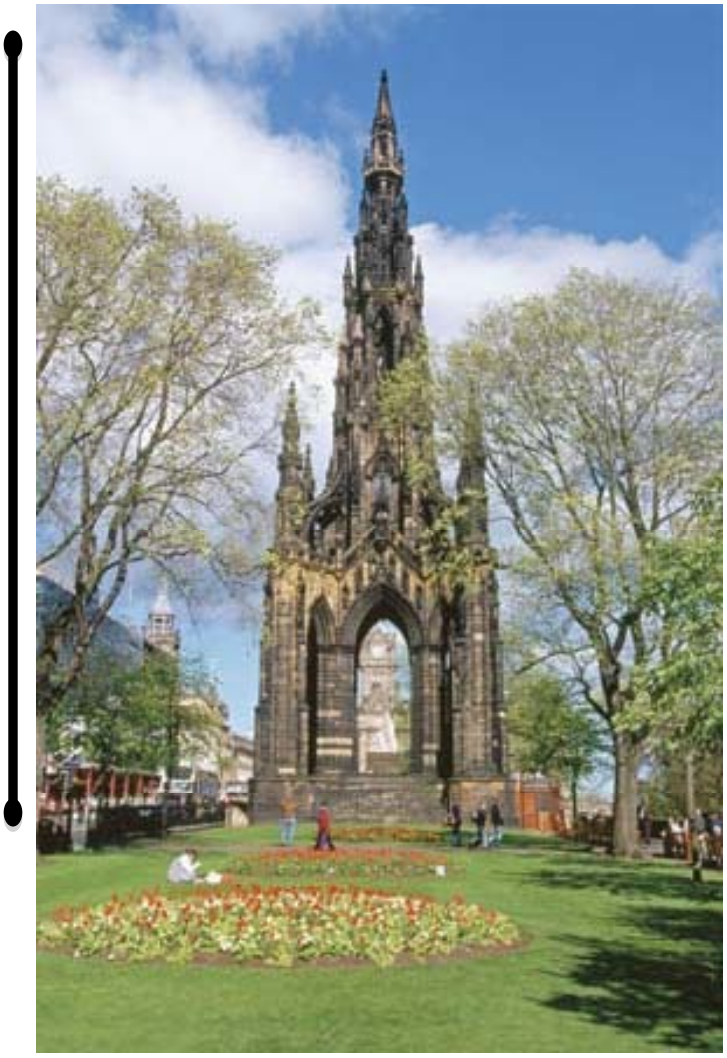
Show your calculations.

The measurement is 4 in.

Working with the scale- 1in = 5ft

4 × 5 = 20 ft

(b)



Scale- 1cm = 6 m

Show your calculations.
The measurement is 10 cm

Working with the scale- 1cm = 6m

10 × 6 = 60 m

4. When you are measuring an object, some units are better suited than others.

Use a ruler to draw a straight line connecting the object with its 'most' appropriate unit of measure.

<u>Unit of Measure</u> <u>Object</u>

ft

in

mm

km

Width of a fingernail

Memphis to Detroit

Vertical Jump

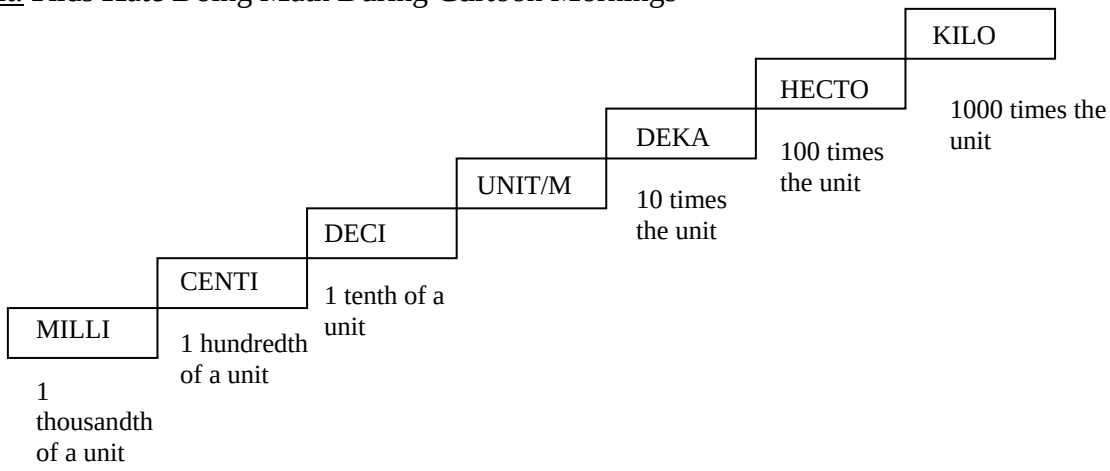
Width of a Textbook

5. Develop a rule for changing between metric units. Use the idea of the number of steps between units and the number 10 to build your method.

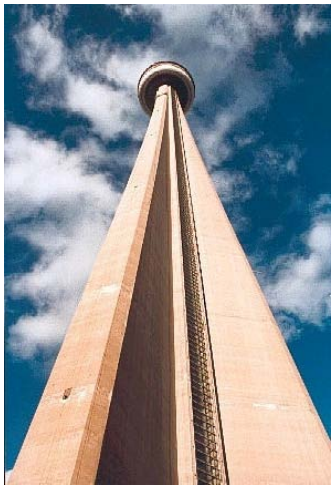
(Answers will vary)

6. Record the *Metric Prefixes* in the spaces provided. Below each, compare it to the unit. One prefix is done for you.

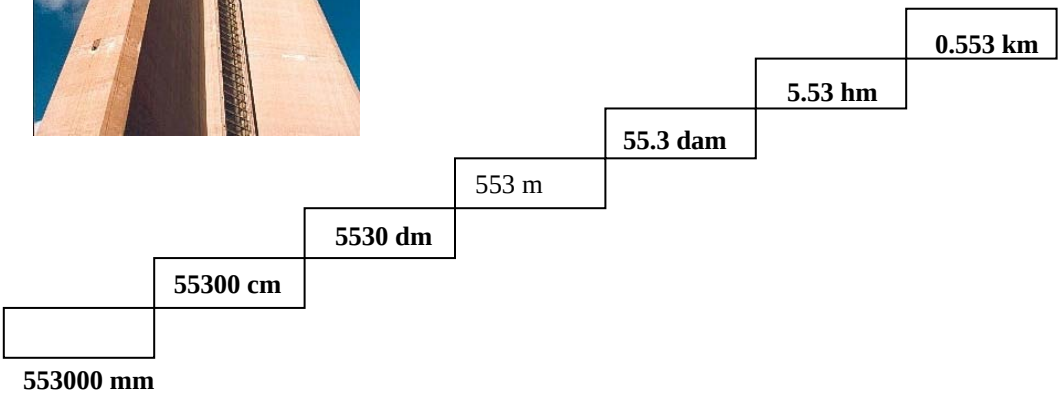
Hint: **K**ids **H**ate **D**oing **M**ath **D**uring **Ca**rtoon **M**ornings



7. For the following measure, complete the conversions on the table provided.



The height of the CN tower is 553 m.



Complete the conversions in the steps table.

8. Now use the *Metric Steps* to make these conversions: (Remember to count the steps.)

☐ **500 cm**	**5 m**
☐ **2 km**	**2000 m**
☐ **5500 ml**	**5.5 litres**
☐ **220 mm**	**22 cm**
☐ **20 kg**	**20 000 g**

Extension Problem

How many meters in one turn if the relay race is 1.6 km for a team of 8 people?

You can use a variety of strategies to arrive at the correct result.

1. You can simply … 1.6 km ÷ 8 = 0.2 km Convert 0.2 km to m= 200 m

2. Convert 1.6 km to m first. 1.6km = 1600 m ÷ 8 = 200 m

Therefore, each turn will be 200 m in the relay race.