

Measurement: Metric System

Date: Notes

Canada uses the metric which is a system of measurement in which all units are based on multiples of ten (10).

We can convert between metric units by multiplying or dividing by powers of 10.

Example 1:

$$1.3 \text{ m} = ? \text{ cm}$$

- Look at your **Metric Prefixes** chart.
- Metres (m) is a base unit.
- To get to centimetres from the base unit, we count two steps to the Right.
- Whenever we count Right, we multiply.
- Therefore, we will move the decimal 2 places to the RIGHT.

$$1.3 \text{ m} = \text{--- cm}$$
$$1.3 \text{ m} = \boxed{130 \text{ cm}}$$

Example 2:

$$8 \text{ g} = ? \text{ mg}$$

- To get from grams (a base unit) to milligrams, we count Right 3 steps in the chart, therefore we Multiply.
- This means we move the decimal 3 places to the Right.

$$8.000.$$
$$8 \text{ g} = \boxed{8000 \text{ mg}}$$

Example 3:

$$3421 \text{ mm} = ? \text{ km}$$

- To get from millimetres to kilometers, we count Left 6 steps in the chart.
- Therefore we will Divide which means we move the decimal 6 places to the Left.

$$003421.$$
$$3421 \text{ mm} = \boxed{.003421 \text{ km}}$$

Example 4:

$$345 \text{ cm} = ? \text{ m} \quad \text{move 2 to LEFT}$$

$$345 \text{ cm} = \boxed{3.45 \text{ m}}$$