

Name: \_\_\_\_\_

# Grade 6

## MEASUREMENT: METRIC CONVERSIONS 1

If you need practice multiplying and dividing by 10, 100, and 1000, complete the **Powerama 6M** and **6D** lessons. Don't forget to play *Metric 6E!* Go to [Mathfrog.ca](http://Mathfrog.ca) for the link.

1. Print the abbreviation for the best metric unit (eg. mm) to measure the:

- a) length of a mitten. \_\_\_\_\_
- b) amount of water in an aquarium. \_\_\_\_\_
- c) length of a transport truck. \_\_\_\_\_
- d) thickness of a textbook. \_\_\_\_\_
- e) mass of a filing cabinet. \_\_\_\_\_
- f) capacity of a water bottle. \_\_\_\_\_
- g) distance to the moon. \_\_\_\_\_
- h) thickness of a telephone wire. \_\_\_\_\_

2. Complete each blank.

- a) 87 m = \_\_\_\_\_ cm
- b) 3400 mL = \_\_\_\_\_ L
- c) 98 mm = \_\_\_\_\_ cm
- d) 900 g = \_\_\_\_\_ kg
- e) 12 km = \_\_\_\_\_ m
- f) 2.1 m = \_\_\_\_\_ mm
- g) 140 mg = \_\_\_\_\_ g
- h) 3700 m = \_\_\_\_\_ km
- i) 0.72 L = \_\_\_\_\_ mL
- j) 140 cm = \_\_\_\_\_ m
- k) 8000 cm = \_\_\_\_\_ m
- l) 21.3 mm = \_\_\_\_\_ cm
- m) 4130 mL = \_\_\_\_\_ L
- n) 3.52 m = \_\_\_\_\_ cm
- o) 9.23 kg = \_\_\_\_\_ g

<b>Metric Prefixes!</b> Mega = 1 000 000 Kilo = 1000 Centi = 0.01 Milli = 0.001 Micro = 0.000001
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3. Complete each blank. The first one has been done for you.

- a) 7 cm + 9 mm = 79 mm
- b) 1300 mL + 4 L = \_\_\_\_\_ L
- c) 12 m + 87 cm = \_\_\_\_\_ cm
- d) 4 g + 800 mg = \_\_\_\_\_ mg
- e) 0.4 km + 400 m = \_\_\_\_\_ m
- h) 1.1 L + 14 mL = \_\_\_\_\_ mL
- g) 69 g + 0.4 kg = \_\_\_\_\_ g
- f) 70 cm + 0.01 km = \_\_\_\_\_ m

4. Place these measurements, in the boxes, in order from smallest to largest.

9 m    18 cm    470 mm    12 mm    2 km    0.2 m    0.01 km    1 cm    113 m

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5. Complete each blank. Recall that  $1 \text{ cm}^3 = 1 \text{ mL}$

- a) 8 L = \_\_\_\_\_ mL = \_\_\_\_\_  $\text{cm}^3$
- b) 1000  $\text{cm}^3$  = \_\_\_\_\_ mL = \_\_\_\_\_ L
- c) 5300 mL = \_\_\_\_\_ L = \_\_\_\_\_  $\text{cm}^3$
- d) 73 000  $\text{cm}^3$  = \_\_\_\_\_ L

Expectations: i) solve problems requiring conversion of metric units  
ii) select the most appropriate metric unit to measure length, mass, and capacity

6. On Mathworld, the standard unit of length is the zappa. The zappa is equal to the height of King Xjot's jump (three metres by earth measurements). Using your knowledge of prefixes, complete each blank.

- a) 1 kilozappa = \_\_\_\_\_ zappas      b) 1 centizappa = \_\_\_\_\_ millizappas  
c) 4 zappas = \_\_\_\_\_ centizappas      d) 1700 millizappas = \_\_\_\_\_ zappas  
e) 5400 zappas = \_\_\_\_\_ kilozappas      f) 1 zappa = \_\_\_\_\_ metres  
g) 12 metres = \_\_\_\_\_ zappas      h) 1200 metres = \_\_\_\_\_ kilozappas



### Did You Know?

To make 1 kg of honey, bees must visit about 4 000 000 flowers. During these visits, the distance travelled is about four times around the earth.

7. Liz wishes to bake some cupcakes. A 2 kg package of cake mix makes 125 cupcakes. How many grams of cake mix does Liz need to bake 5 cupcakes?



8. Carol is racing on a "bumper-car" track. At the place where she is attempting to pass a slower car, the track is only 4 m wide. The other car, which is 1840 mm wide, is very close to the outside wall of the track. Carol's car is 201.5 cm wide. Is there enough space for Carol to pass? If so, how much space will there be to spare?



### Try This!!

Jessica has a rectangular pool that is 400cm wide, 0.006km long, and 5000mm deep. How many litres of water will the pool hold if it is filled to the very top?



What larger unit would be better to use and why?