

Name: _____

Grade 6

MEASUREMENT: METRIC CONVERSIONS 2

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 6H!* Go to Mathfrog.ca for the link.

1. **Select the unit you would use to measure each of the following. Explain your choice.**

- a) the mass of a banana _____

- b) the amount of water in a bathtub _____

- c) the perimeter of your school _____

2. **Complete each blank. Recall that $1\text{cm}^3 = 1\text{mL}$. The first one has been done for you.**

- a) $742\text{cm} = \underline{7.42} \text{m}$ b) $8.19\text{kg} = \underline{\hspace{2cm}} \text{g}$ c) $2730\text{mL} = \underline{\hspace{2cm}} \text{L}$
d) $0.91\text{kg} = \underline{\hspace{2cm}} \text{mg}$ e) $1000\text{cm} = \underline{\hspace{2cm}} \text{km}$ f) $3.1\text{cm}^3 = \underline{\hspace{2cm}} \text{L}$
g) $123\text{cm} = \underline{\hspace{2cm}} \text{m}$ h) $41\text{g} = \underline{\hspace{2cm}} \text{kg}$ i) $2173\text{mm} = \underline{\hspace{2cm}} \text{cm}$
j) $411\text{mm} = \underline{\hspace{2cm}} \text{m}$ k) $4.21\text{L} = \underline{\hspace{2cm}} \text{cm}^3$ l) $0.19\text{kL} = \underline{\hspace{2cm}} \text{mL}$

3. **Complete each blank. The first one has been done for you.**

- a) $8\text{mL} + 4\text{L} = \underline{4008} \text{mL}$ b) $0.8\text{g} - 12.7\text{mg} = \underline{\hspace{2cm}} \text{g}$
c) $720\text{cm} - 49\text{mm} = \underline{\hspace{2cm}} \text{cm}$ d) $5468\text{mL} + 957\text{L} = \underline{\hspace{2cm}} \text{L}$
e) $230\text{g} + 1.2 \text{kg} = \underline{\hspace{2cm}} \text{kg}$ f) $3.2\text{km} - 329\text{cm} = \underline{\hspace{2cm}} \text{m}$
g) $45\text{mm} + 5\text{km} - 540\text{cm} = \underline{\hspace{2cm}} \text{m}$

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

- a) $4.56\text{L} = \underline{\hspace{2cm}} \text{mL} = \underline{\hspace{2cm}} \text{cm}^3$
b) $2.74\text{cm}^3 = \underline{\hspace{2cm}} \text{mL} = \underline{\hspace{2cm}} \text{L}$
c) $7.81\text{mL} = \underline{\hspace{2cm}} \text{cm}^3 = \underline{\hspace{2cm}} \text{L}$

Did You Know?

Due to the earth's gravity
it is impossible for
mountains to be higher
than 15 000 m.



5. **How do the prefixes milli, centi and kilo change the metric unit 'metre'? Use numbers, pictures and/or words in your response.**

6. In a 0.080 kilometre hurdle race, the distances between hurdles are equal, the first hurdle is 12 000 millimetres from the starting line, and the last hurdle is 1200 centimetres from the finish line. If there are 8 hurdles in all, how far apart are consecutive hurdles? Give your answer in the most appropriate units.



7. A truck driver delivers strawberries, blueberries and raspberries to the local farmers market every morning. The truck can transport $\frac{1}{4}$ tonne of fruit; $\frac{2}{5}$ of which are strawberries, $\frac{1}{5}$ are blueberries and the rest are raspberries. How many packs of each kind of berry will the truck be able to deliver if a single pack of strawberries has a mass of 160g, a single pack of blueberries has a mass of 250g and a single pack of raspberries has a mass of 200g. (Note: 1 tonne = 1000kg)

Try This!

Using your knowledge of metric conversions, complete the following blanks.

$$1 \text{ cm}^2 = \underline{\quad} \text{ cm} \times \underline{\quad} \text{ cm} = \underline{\quad} \text{ mm} \times \underline{\quad} \text{ mm} = \underline{\quad} \text{ mm}^2$$

$$1 \text{ m}^2 = \underline{\quad} \text{ m} \times \underline{\quad} \text{ m} = \underline{\quad} \text{ cm} \times \underline{\quad} \text{ cm} = \underline{\quad} \text{ cm}^2$$

$$1 \text{ km}^2 = \underline{\quad} \text{ km} \times \underline{\quad} \text{ km} = \underline{\quad} \text{ m} \times \underline{\quad} \text{ m} = \underline{\quad} \text{ m}^2$$



a) $9 \text{ m}^2 = \underline{\quad\quad\quad} \text{ cm}^2$ b) $600 \text{ mm}^2 = \underline{\quad\quad\quad} \text{ cm}^2$ c) $22 \text{ km}^2 = \underline{\quad\quad\quad} \text{ m}^2$

d) $500\,000 \text{ m}^2 = \underline{\quad\quad\quad} \text{ km}^2$ e) $0.5 \text{ m}^2 = \underline{\quad\quad\quad} \text{ cm}^2$ f) $47\,000 \text{ cm}^2 = \underline{\quad\quad\quad} \text{ m}^2$

$$1 \text{ cm}^3 = \underline{\quad} \text{ cm} \times \underline{\quad} \text{ cm} \times \underline{\quad} \text{ cm} = \underline{\quad} \text{ mm} \times \underline{\quad} \text{ mm} \times \underline{\quad} \text{ mm} = \underline{\quad} \text{ mm}^3$$

$$1 \text{ m}^3 = \underline{\quad} \text{ m} \times \underline{\quad} \text{ m} \times \underline{\quad} \text{ m} = \underline{\quad} \text{ cm} \times \underline{\quad} \text{ cm} \times \underline{\quad} \text{ cm} = \underline{\quad} \text{ cm}^3$$

a) $3 \text{ m}^3 = \underline{\quad\quad\quad} \text{ cm}^3$ b) $4000 \text{ mm}^3 = \underline{\quad\quad\quad} \text{ cm}^3$ c) $13 \text{ km}^3 = \underline{\quad\quad\quad} \text{ m}^3$

If you have time, try http://www.quia.com/rr/30535.html?AP_rand=1474811967

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