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## Converting Metric Units of Capacity

How to change a capacity measurement from one metric unit to another:

Converting a capacity from a smaller to a larger metric unit 2,000 milliliters $=$ $\qquad$ liters


Think: If I measure the same capacity using a larger unit, I will need a smaller number of units.

Operation: Divide.
You know 1,000 mL = 1 L .
Find $2,000 \div 1,000 ; 2,000 \mathrm{~mL}=2 \mathrm{~L}$

Converting a capacity from a larger to a smaller metric unit


Think: If I measure the same capacity using a smaller unit, I will need a larger number of units.

Operation: Multiply.
You know $1 \mathrm{~L}=1,000 \mathrm{~mL}$.
Find $3 \times 1,000 ; 3 \mathrm{~L}=3,000 \mathrm{~mL}$

| Relationships Between Metric Units of Capacity |  |  |  |
| :---: | :---: | :---: | :---: |
| Liter |  |  | Millimeter |
| 1 L | $=$ | $1,000 \mathrm{~mL}$ |  |

Complete.

1. $6 \mathrm{~L}=$ $\qquad$ mL
2. $4,000 \mathrm{~mL}=$ $\qquad$ L
3. $8,000 \mathrm{~mL}=$ $\qquad$ L
4. $91,000 \mathrm{~mL}=$ $\qquad$ L

Estimation Circle the capacity that is most reasonable for each container.
5. soup bowl

2 L or 300 mL
6. bathtub

200 L or $34,000 \mathrm{~mL}$

## Converting Metric Units of Capacity

Convert each unit.

1. $5 \mathrm{~L}=$ $\qquad$ mL
2. $13,000 \mathrm{~mL}=\square \mathrm{L}$
3. $16 \mathrm{~L}=$ $\qquad$ mL
4. $4,000 \mathrm{~mL}=$ $\qquad$ L
5. $9,000 \mathrm{~mL}=$ $\qquad$ L
6. $8 \mathrm{~L}=$ $\qquad$ mL
7. You are preparing for a breakfast party and need enough milk for 20 people. Each person will drink about 200 mL of milk. Which is the best estimate of the amount of milk you should prepare: 400 mL or 4 L ? Why?

Which capacity is most reasonable for each container?
8. coffee mug 300 mL or 3 L
9. vase

20 mL or 2 L
10. cleaning bucket 500 mL or 5 L
11. Which of the following is equal to $6,000 \mathrm{~mL}$ ?
A 6 L
B 60 L
C 600 L
D $60,000 \mathrm{~L}$
12. Writing to Explain Suppose you have a $100-\mathrm{mL}$ cup, a $300-\mathrm{mL}$ cup, and a $500-\mathrm{mL}$ cup. List two different ways you can measure exactly 1 L .

