

Additional Practice 12-5

Convert Metric Units of Capacity

Another Look!

Remember:

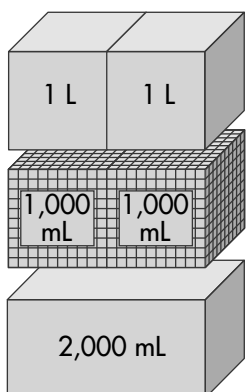
To change from liters to milliliters, multiply by 10^3 . To change from milliliters to liters, divide by 10^3 .



How to change from one metric unit of capacity to another:

Converting a capacity from a smaller to a larger metric unit:

2,000 milliliters = _____ liters

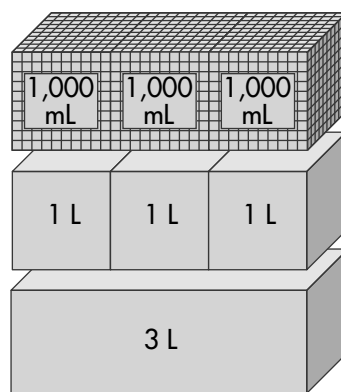


You know $10^3 \text{ mL} = 1 \text{ L}$, so divide.

Find $2,000 \div 1,000$; $2,000 \text{ mL} = 2 \text{ L}$.

Converting a capacity from a larger to a smaller metric unit:

3 liters = _____ milliliters



You know $1 \text{ L} = 10^3 \text{ mL}$, so multiply.

Find $3 \times 1,000$; $3 \text{ L} = 3,000 \text{ mL}$.

In 1–9, convert each unit of capacity.

1. $5 \text{ L} = \underline{5,000} \text{ mL}$

2. $13,000 \text{ mL} = \underline{13} \text{ L}$

3. $1.6 \text{ L} = \underline{1,600} \text{ mL}$

4. $4,750 \text{ mL} = \underline{4.75} \text{ L}$

5. $950 \text{ mL} = \underline{0.95} \text{ L}$

6. $0.4 \text{ L} = \underline{400} \text{ mL}$

7. $2.7 \text{ L} = \underline{2,700} \text{ mL}$

8. $8,400 \text{ mL} = \underline{8.4} \text{ L}$

9. $0.071 \text{ L} = \underline{71} \text{ mL}$

In 10 and 11, complete each table to show equivalent measures.

10.

liters	90	9	0.9
milliliters	90,000	9,000	900

11.

milliliters	250	2,500	25,000
liters	0.25	2.5	25



- 12. Construct Arguments** Tell whether you would use multiplication or division to convert milliliters to liters. Explain your answer.

Sample answer: I would divide by 1,000 to convert milliliters to liters, because $1,000 \text{ mL} = 1 \text{ L}$.

- 13. Algebra** Complete the following table. Then write an equation that can be used to convert p pounds to o ounces.

Sample answer: $p \times 16 = o$

Pounds	3	4	5	6	7
Ounces	48	64	80	96	112

- 14.** The length of a rectangular garden is 10 yards and its width is 10 feet. What is the perimeter of the garden in feet?

80 feet

Are both dimensions given in the same unit?

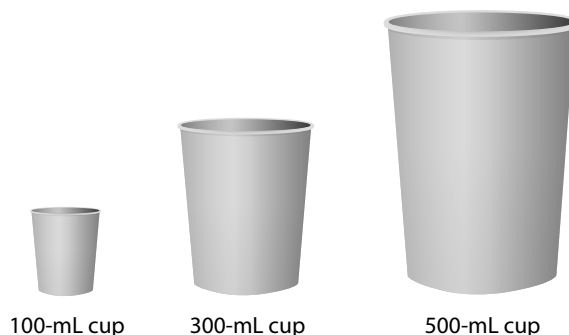


- 15.** You are preparing for a breakfast party and need enough milk for 20 people. Each person will drink about 200 milliliters of milk. Which is the better estimate of the amount of milk you should prepare: 400 milliliters or 4 liters? Why?

$20 \times 200 = 4,000 \text{ mL}$, so you need 4 L.

- 16. Higher Order Thinking** Suppose you have the three cups shown at the right. List two different ways you can measure exactly 1 liter.

Answers will vary. Sample answer: You can measure two 500-mL cups, or you can measure three 300-mL cups and one 100-mL cup.



Assessment Practice

- 17.** A community center has a swimming pool that holds 29,000,000 milliliters of water. How many liters of water can the pool hold?

(A) 290,000,000 L
(B) 2,900,000 L
(C) 290,000 L
(D) 29,000 L

- 18.** There are 1.5 liters of punch in a pitcher. How many milliliters of punch are in the pitcher?

(A) 100 mL
(B) 1,500 mL
(C) 1,000 mL
(D) 15,000 mL