

**6-5 Study Guide and Intervention****Measurement: Changing Metric Units**

The table below is a summary of how to convert measures in the metric system.

	Larger Units → Smaller Units	Smaller Units → Larger Units
<b>Units of Length (meter)</b>	km to m – multiply by 1,000 m to cm – multiply by 100 m to mm – multiply by 1,000 cm to mm – multiply by 10	mm to cm – divide by 10 mm to m – divide by 1,000 cm to m – divide by 100 m to km – divide by 1,000
<b>Units of Mass (kilogram)</b>	kg to g – multiply by 1,000 g to mg – multiply by 1,000	mg to g – divide by 1,000 g to kg – divide by 1,000
<b>Units of Capacity (liter)</b>	kL to L – multiply by 1,000 L to mL – multiply by 1,000	mL to L – divide by 1,000 L to kL – divide by 1,000

**Examples 1** Complete.  $62 \text{ cm} = \underline{\hspace{1cm}} \text{ m}$

To convert from centimeters to meters, divide by 100.

$$62 \div 100 = 0.62$$

$$62 \text{ cm} = 0.62 \text{ m}$$

**Example 2** Complete.  $2.6 \text{ kL} = \underline{\hspace{1cm}} \text{ L}$

To convert from kiloliters to liters, multiply by 1,000.

$$2.6 \times 1,000 = 2,600$$

$$2.6 \text{ kL} = 2,600 \text{ L}$$

**Exercises**

Complete.

1.  $650 \text{ cm} = \underline{\hspace{1cm}} \text{ m}$     **6.5**

2.  $57 \text{ kg} = \underline{\hspace{1cm}} \text{ g}$     **57,000**

3.  $751 \text{ mg} = \underline{\hspace{1cm}} \text{ g}$     **0.751**

4.  $8.2 \text{ L} = \underline{\hspace{1cm}} \text{ mL}$     **8,200**

5.  $52 \text{ L} = \underline{\hspace{1cm}} \text{ kL}$     **0.052**

6.  $892 \text{ mm} = \underline{\hspace{1cm}} \text{ m}$     **0.892**

7.  $121.4 \text{ kL} = \underline{\hspace{1cm}} \text{ L}$     **121,400**

8.  $0.72 \text{ cm} = \underline{\hspace{1cm}} \text{ mm}$     **7.2**

9.  $67.3 \text{ g} = \underline{\hspace{1cm}} \text{ kg}$     **0.0673**

10.  $5.2 \text{ g} = \underline{\hspace{1cm}} \text{ mg}$     **5,200**

11.  $0.05 \text{ m} = \underline{\hspace{1cm}} \text{ mm}$     **50**

12.  $2,500 \text{ mg} = \underline{\hspace{1cm}} \text{ g}$     **2.5**

13.  $32 \text{ mm} = \underline{\hspace{1cm}} \text{ cm}$     **3.2**

14.  $96 \text{ m} = \underline{\hspace{1cm}} \text{ cm}$     **9,600**