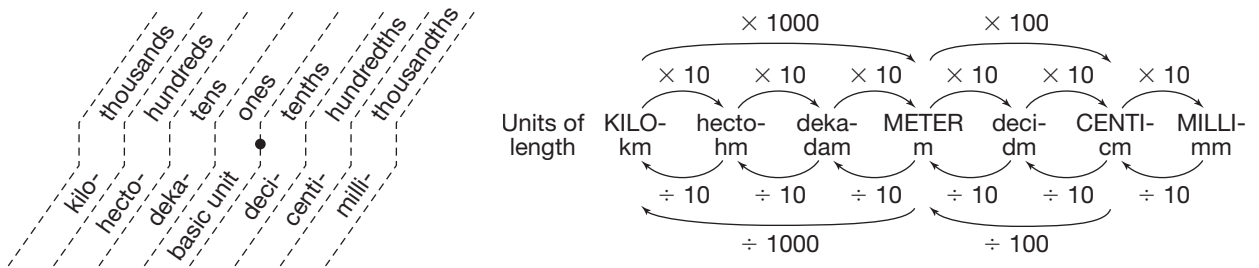


7-8 Using the Metric System (Pages 358–361)

Many countries use the **metric system of measurement**. In the metric system, a prefix is added to the basic units to indicate the decimal place-value position of the measurement. The chart below shows the relationships between the prefixes and the decimal place-value positions. Note that each place value is 10 times the place value to its right. The value of each metric prefix is also 10 times that of the prefix to its right. Converting units within the metric system follows the same procedure as multiplying or dividing by powers of ten.



Metric Units	<ul style="list-style-type: none"> • Metric units of length are based on the meter (m), which is a little longer than a yard. Many metric rulers are marked in centimeter and millimeter units. Distances between cities are measured in kilometers. • Metric units of capacity are based on the liter (L). A liter is a little more than a quart. Many drink containers are measured in milliliters. • Metric units of mass are based on the gram (g). A paperclip weighs about a gram. A kilogram is a little over two pounds.
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PRACTICE

Write which metric unit you would probably use to measure each item.

- | | |
|---------------------------------|----------------------------|
| 1. distance between your eyes | 2. volume of a soda bottle |
| 3. distance between two schools | 4. weight of an eraser |

Complete each sentence.

- | | | |
|----------------|-----------------|----------------|
| 5. 5 m = ? cm | 6. 500 m = ? km | 7. 4 L = ? mL |
| 8. 59 g = ? mg | 9. 40 mm = ? cm | 10. 7 kL = ? L |

11. **Sports** A jockey must always be weighed before a race to measure how much the horse is carrying. What is the best metric unit for taking this measurement?



12. **Standardized Test Practice** Which metric unit is most appropriate for stating the distance a school bus travels on a typical school day?

- A** mg **B** cm **C** km **D** mm

Answers: 1. cm 2. L 3. km 4. g 5. 500 6. 0.5 7. 4000 8. 59,000 9. 4 10. 7000 11. kg 12. C