



Additional Practice 12-4

Convert Metric Units of Length

Another Look!

Remember:

$$1 \text{ km} = 10^3 \text{ m} = 1,000 \text{ m}$$

$$1 \text{ m} = 10^2 \text{ cm} = 100 \text{ cm}$$

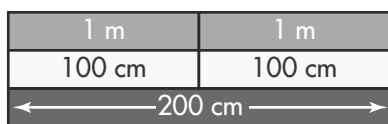
$$1 \text{ m} = 10^3 \text{ mm} = 1,000 \text{ mm}$$

$$1 \text{ cm} = 10 \text{ mm}$$

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

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

$$200 \text{ centimeters} = \underline{\hspace{2cm}} \text{ meters}$$

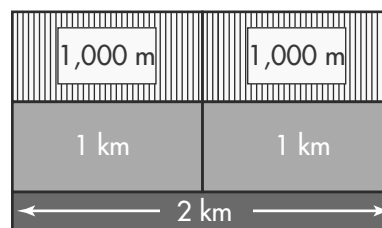


You know $10^2 \text{ cm} = 1 \text{ m}$, so divide.

Find $200 \div 100$; $200 \text{ cm} = 2 \text{ m}$.

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

$$2 \text{ kilometers} = \underline{\hspace{2cm}} \text{ meters}$$



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

Find $2 \times 1,000$; $2 \text{ km} = 2,000 \text{ m}$.

In **1–6**, convert each unit of length.

1. $25 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$

2. $345 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$

3. $4.5 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$

4. $10 \text{ m} = \underline{\hspace{2cm}} \text{ mm}$

5. $987 \text{ mm} = \underline{\hspace{2cm}} \text{ cm}$

6. $5 \text{ km} = \underline{\hspace{2cm}} \text{ m}$

In **7–9**, compare lengths. Write $>$, $<$, or $=$ for each \bigcirc .

7. $3 \text{ km} \bigcirc 5,000 \text{ m}$

8. $800 \text{ cm} \bigcirc 8 \text{ m}$

9. $38.5 \text{ mm} \bigcirc 10 \text{ cm}$

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

10.

mm	5	85	
cm			90

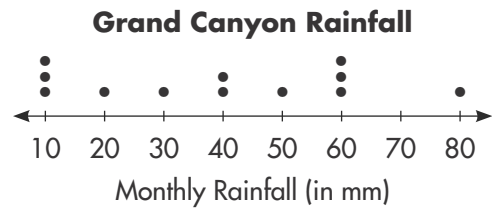
11.

km	0.4		25
m		7,000	

How can you double check that your answers are correct?



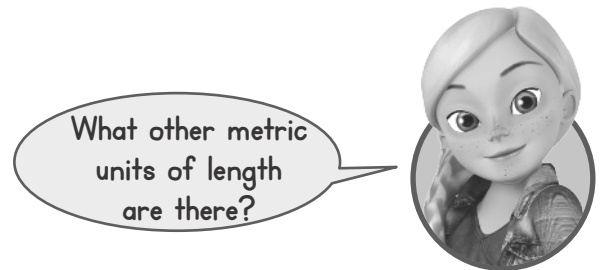
- 12. Higher Order Thinking** Park rangers at the North Rim of the Grand Canyon recorded the amounts of rainfall over 12 months. What was the total amount of rainfall in centimeters?



- 13.** What is the difference between the greatest and least amounts of monthly rainfall? Write an equation to model your work.

- 14.** Arturo builds a cube that measures 5 inches on each side. What is the volume of Arturo's cube? Write an equation to show your work.

- 15. Use Structure** List three measurements with different units that are equal to 5 meters.



- 16.** If you walked all three trails in one day, how far would you walk? Write the answer in meters and in kilometers.

Trail	Length
Spring Hollow	2 km
Brookside	2,400 m
Oak Ridge	1 km 600 m

- 17.** Explain how you can move the decimal point to convert 3,200 meters to kilometers.

Assessment Practice

- 18.** Cory finds a leaf that is 5 cm long. Which measurement is equivalent to 5 cm?

- (A) 0.05 mm
- (B) 0.5 mm
- (C) 50 mm
- (D) 500 mm

- 19.** Which of these number sentences is **NOT** true?

- (A) 4,000,000 mm = 4 km
- (B) 300 mm > 3 cm
- (C) 5 m > 5,000 mm
- (D) 2,000 m < 20 km