LESSON MAKER PRO

Length Switch

Use conversion ratios to solve length problems.

GRADE 6 · 6.GM.4

6.GM.4 "Choose appropriate units of measurement and use ratios to convert within measurement systems to model and solve real-world and mathematical problems..."

NAME _____ DATE _____

CHANGE THE UNIT

A conversion ratio changes the unit without changing the length. Multiply by a ratio that cancels the starting unit, then write the new unit with your answer.

WORKED EXAMPLE

Convert 7 meters to millimeters.

1. 1 m = 100 cm and 1 cm = 10 mm.
2. 100 × 10 = 1,000, so 1 m = 1,000 mm.
3. 7 m × (1,000 mm / 1 m) = 7,000 mm.

Answer: 7,000 mm

PRACTICE 6 problems

1 Convert 5 feet to inches. Use 1 foot = 12 inches.

ANSWER _____

2 Convert 96 inches to feet. Use 1 foot = 12 inches.

ANSWER _____

3 Convert 6 yards to feet. Use 1 yard = 3 feet.

ANSWER _____

4 Convert 250 centimeters to meters. Use 1 meter = 100 centimeters.

ANSWER _____

5 Convert 1.4 meters to centimeters. Use 1 meter = 100 centimeters.

ANSWER _____

6 Convert 75 millimeters to centimeters. Use 1 centimeter = 10 millimeters.

ANSWER _____

APPLY IT Show your work

1 You have 2.5 meters of ribbon to decorate a poster. You cut off 80 centimeters. How many centimeters of ribbon remain? Use 1 meter = 100 centimeters.

WORK SPACE

ANSWER _____

2 A biking app shows a 1.5-mile route. You ride the route twice. How many feet do you ride in all? Use 1 mile = 5,280 feet.

WORK SPACE

ANSWER _____

CHALLENGE One step up

A club has 16 feet of tape. It cuts 5 pieces that are each 28 inches long. How many inches of tape remain? Show your conversion and subtraction. Use 1 foot = 12 inches.

WORK SPACE AND ANSWER

ANSWER KEY

Length Switch

GRADE 6 · 6.GM.4

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Convert 5 feet to inches. Use 1 foot = 12 inches.	**60 inches**
2	Convert 96 inches to feet. Use 1 foot = 12 inches.	**8 feet**
3	Convert 6 yards to feet. Use 1 yard = 3 feet.	**18 feet**
4	Convert 250 centimeters to meters. Use 1 meter = 100 centimeters.	**2.5 meters**
5	Convert 1.4 meters to centimeters. Use 1 meter = 100 centimeters.	**140 centimeters**
6	Convert 75 millimeters to centimeters. Use 1 centimeter = 10 millimeters.	**7.5 centimeters**

PART 2 · APPLY IT

1. **170 centimeters** Convert 2.5 meters to 250 centimeters. Subtract 80 centimeters to get 170 centimeters.
2. **15,840 feet** Two rides total 3 miles. Multiply 3 by 5,280 to get 15,840 feet.

CHALLENGE

16 × 12 = 192 inches; 5 × 28 = 140 inches; 192 − 140 = 52 inches remain.

Accept equivalent correct conversion ratios. For the challenge, students may subtract the length of each piece one at a time.