

Unit Switch Challenge

Use ratios to move between metric and customary units.

GRADE 6 • 6.NR.4.7

6.NR.4.7 "Use ratios to convert within measurement systems (customary and metric) to solve authentic problems that exist in everyday life."

NAME _____

DATE _____

CONVERT WITH RATIOS

To convert, use a ratio that compares equal amounts, such as a conversion fact. Multiply when changing to a smaller unit, and divide when changing to a larger unit. Check whether your answer should have more or fewer units.

WORKED EXAMPLE

Convert 7 quarts to cups.

- 1 quart = 4 cups.
- 7 quarts $\times$ 4 cups per quart = 28 cups.
- The quarts cancel, leaving cups.

Answer: 28 cups

PRACTICE 6 problems

1 Convert 36 inches to feet.

ANSWER _____

2 Convert 2 pounds to ounces.

ANSWER _____

3 Convert 1,500 milliliters to liters.

ANSWER _____

4 Convert 6 kilometers to meters.

ANSWER _____

5 Convert 3 yards to inches.

ANSWER _____

6 Convert 72 fluid ounces to cups.

ANSWER _____

APPLY IT Show your work

- 1** The drama club needs 2 liters of paint for a set. Paint comes in 250-milliliter jars. How many jars does the club need?

WORK SPACE

ANSWER _____

- 2** A skateboard club has 72 inches of reflective tape. Each skateboard needs 2 feet of tape. How many skateboards can the club decorate?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A fitness app combines two walking routes. One route is 2 kilometers 350 meters, and the other is 1 kilometer 650 meters. The app counts one lap as 500 meters. How many laps is the combined distance?

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Convert 36 inches to feet.	3 feet
2	Convert 2 pounds to ounces.	32 ounces
3	Convert 1,500 milliliters to liters.	1.5 liters
4	Convert 6 kilometers to meters.	6,000 meters
5	Convert 3 yards to inches.	108 inches
6	Convert 72 fluid ounces to cups.	9 cups

PART 2 • APPLY IT

1. **8 jars** Convert 2 liters to 2,000 milliliters. Then divide 2,000 by 250 to get 8 jars.
2. **3 skateboards** Convert 72 inches to 6 feet. Then divide 6 feet by 2 feet per skateboard to get 3 skateboards.

CHALLENGE**8 laps**

Accept equivalent forms such as 1 1/2 liters for 1.5 liters. Require correct units in each response.