

# Unit Switch Lab

*Change measurement units with multiplication or division.*

**GRADE 4 • MA.4.M.1.2**

**MA.4.M.1.2** "Convert within a single system of measurement using the units: yards, feet, inches; kilometers, meters, centimeters, millimeters; pounds, ounces; kilograms, grams; gallons, quarts, pints, cups; liter, milliliter; and hours, minutes..."

NAME \_\_\_\_\_

DATE \_\_\_\_\_

## CHOOSE THE CONVERSION

Start with the unit you have and use a conversion fact to change to the unit you need. Multiply when you change a larger unit into a smaller unit. Divide when you change a smaller unit into a larger unit, then check whether your answer size makes sense.

## WORKED EXAMPLE

Convert 7 feet to inches.

1. 1 foot = 12 inches.

2.  $7 \times 12 = 84$ .

**Answer: 84 inches**

## PRACTICE 6 problems

**1** Convert 5 yards to feet.

ANSWER \_\_\_\_\_

**2** Convert 6,000 meters to kilometers.

ANSWER \_\_\_\_\_

**3** Convert 8 pounds to ounces.

ANSWER \_\_\_\_\_

**4** Convert 9 cups to pints and cups.

ANSWER \_\_\_\_\_

**5** Convert 2 liters to milliliters.

ANSWER \_\_\_\_\_

**6** Convert 4 hours to minutes.

ANSWER \_\_\_\_\_

## APPLY IT Show your work

- 1** For a lemonade stand, Nia fills a cooler with 2 gallons of lemonade. How many cups of lemonade are in the cooler?

WORK SPACE

ANSWER \_\_\_\_\_

- 2** A video game tournament lasts 2 hours 35 minutes. How many minutes does the tournament last?

WORK SPACE

ANSWER \_\_\_\_\_

## CHALLENGE One step up

### CHALLENGE

A ribbon is 3 yards 2 feet long. How many inches long is the ribbon?

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**PART 1 • PRACTICE**

| # | PROBLEM                             | ANSWER                   |
|---|-------------------------------------|--------------------------|
| 1 | Convert 5 yards to feet.            | <b>15 feet</b>           |
| 2 | Convert 6,000 meters to kilometers. | <b>6 kilometers</b>      |
| 3 | Convert 8 pounds to ounces.         | <b>128 ounces</b>        |
| 4 | Convert 9 cups to pints and cups.   | <b>4 pints 1 cup</b>     |
| 5 | Convert 2 liters to milliliters.    | <b>2,000 milliliters</b> |
| 6 | Convert 4 hours to minutes.         | <b>240 minutes</b>       |

**PART 2 • APPLY IT**

1. **32 cups** There are 16 cups in 1 gallon. Multiply  $2 \times 16$  to get 32 cups.
2. **155 minutes** Convert 2 hours to 120 minutes. Add  $120 + 35$  to get 155 minutes.

**CHALLENGE****132 inches**

Accept correct unit names or standard abbreviations, such as ft., min., and mL. For the cups-to-pints item, accept 4 pints 1 cup only, since the question asks for both units.