

Unit Switch Quest

Convert customary units in real situations.

GRADE 4 • 4.MG.1

4.MG.1 "The student will reason mathematically to solve problems, including those in context, that involve length, weight/mass, and liquid volume using U.S. Customary and metric units..."

NAME _____

DATE _____

CONVERT BETWEEN UNITS

When you change from a larger unit to a smaller unit, multiply.
When you change from a smaller unit to a larger unit, divide.
Use these facts: 12 inches = 1 foot, 3 feet = 1 yard, 16 ounces = 1 pound, 2 cups = 1 pint, 2 pints = 1 quart, and 4 quarts = 1 gallon.

WORKED EXAMPLE

How many inches are in 7 feet?

- 1 foot = 12 inches.
- $7 \times 12 = 84$.
- So 7 feet equals 84 inches.

Answer: 84 inches

PRACTICE 6 problems

1 How many feet are in 3 yards?

ANSWER _____

2 48 inches = ____ feet

ANSWER _____

3 2 pounds = ____ ounces

ANSWER _____

4 96 ounces = ____ pounds

ANSWER _____

5 2 gallons = ____ quarts

ANSWER _____

6 2 pints = ____ cups

ANSWER _____

APPLY IT Show your work

- 1** For a school fair, Maya has 5 yards of ribbon. She cuts the ribbon into pieces that are 3 feet long. How many pieces can she cut?

WORK SPACE

ANSWER _____

- 2** A gaming club makes 2 gallons of fruit punch. They pour the punch into quart pitchers. How many pitchers can they fill?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A pet shelter has 9 pounds of dog food. One scoop holds 6 ounces. Can the shelter fill exactly 24 scoops? Explain your reasoning.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	How many feet are in 3 yards?	9 feet
2	48 inches = ____ feet	4 feet
3	2 pounds = ____ ounces	32 ounces
4	96 ounces = ____ pounds	6 pounds
5	2 gallons = ____ quarts	8 quarts
6	2 pints = ____ cups	4 cups

PART 2 • APPLY IT

1. **5 pieces** Convert 5 yards to 15 feet. Then divide 15 feet by 3 feet per piece.
2. **8 pitchers** Each gallon equals 4 quarts. Multiply 2 gallons by 4 quarts per gallon.

CHALLENGE

Yes. 9 pounds = 144 ounces, and $144 \div 6 = 24$, so the shelter can fill exactly 24 scoops.

Accept correct answers with equivalent unit labels. For the challenge, students should show that they convert pounds to ounces before dividing by the ounces in one scoop.