

Unit Switch Quest

Convert first, then solve.

GRADE 5 • MA.5.M.1

MA.5.M.1 "Convert measurement units to solve multi-step problems."

NAME _____

DATE _____

CHOOSE ONE UNIT

Use a conversion fact to rewrite all measurements in the same unit before you calculate. For example, 12 inches = 1 foot and 4 cups = 1 quart. Then add, subtract, multiply, or divide, and check that your answer uses the unit asked for.

WORKED EXAMPLE

A ribbon is 3 yards 2 feet long. It is cut into 4 equal pieces. How many inches long is each piece?

1. 3 yards = 9 feet.
2. 9 feet + 2 feet = 11 feet.
3. 11 feet = 132 inches.
4. $132 \div 4 = 33$ inches.

Answer: 33 inches

PRACTICE 6 problems

- 1** A 5-foot 8-inch board is joined to a 1-foot 7-inch board. What is the total length in inches?

ANSWER _____

- 2** Six quarts of juice are poured equally into 8 bottles. How many cups of juice are in each bottle?

ANSWER _____

- 3** Ten pounds of apples are placed equally into 5 bags. How many ounces of apples are in each bag?

ANSWER _____

- 4** A 7-meter 50-centimeter ribbon is divided into 5 equal pieces. How many centimeters long is each piece?

ANSWER _____

- 5** A tank holds 8 gallons of water. After 6 quarts are used, how many cups of water remain?

ANSWER _____

- 6** A 9-minute video plays 5 times. How many seconds does it play in all?

ANSWER _____

APPLY IT Show your work

- 1** The robotics club has 5 yards 1 foot of wire. They cut it into 6 equal lengths for small robots. How many inches of wire are in each length?

WORK SPACE

ANSWER _____

- 2** The snack booth has 9 gallons of lemonade. It fills pitchers that each hold 8 cups. How many full pitchers can the booth fill?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A stage crew joins an 8-foot 7-inch banner and a 5-foot 9-inch banner. Then they trim off 1 foot 6 inches. What is the length of the banner in inches?

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A 5-foot 8-inch board is joined to a 1-foot 7-inch board. What is the total length in inches?	87 inches
2	Six quarts of juice are poured equally into 8 bottles. How many cups of juice are in each bottle?	3 cups
3	Ten pounds of apples are placed equally into 5 bags. How many ounces of apples are in each bag?	32 ounces
4	A 7-meter 50-centimeter ribbon is divided into 5 equal pieces. How many centimeters long is each piece?	150 centimeters
5	A tank holds 8 gallons of water. After 6 quarts are used, how many cups of water remain?	104 cups
6	A 9-minute video plays 5 times. How many seconds does it play in all?	2,700 seconds

PART 2 • APPLY IT

1. **32 inches** Convert 5 yards 1 foot to feet, then to inches. Divide 192 inches by 6.
2. **18 pitchers** Convert 9 gallons to 144 cups. Divide 144 cups by 8 cups per pitcher.

CHALLENGE

154 inches

Accept answers only when they include the requested unit. For work, accept any correct conversion path that uses one unit before the final calculation.