LESSON MAKER PRO

Measure the Difference

Convert weights and capacities to solve problems.

GRADE 7 · 7.GM.3.1

7.GM.3.1 "Solve problems that require the conversion of weights and capacities within the same measurement systems using appropriate units."

NAME _____ DATE _____

CHOOSE A COMMON UNIT

To convert to a smaller unit, multiply. To convert to a larger unit, divide. Use these facts: 1 kg = 1000 g, 1 L = 1000 mL, 1 lb = 16 oz, and 1 gal = 4 qt.

WORKED EXAMPLE

Convert 11/20 kg to grams.

1. Use 1 kg = 1000 g.
2. Multiply: 11/20 x 1000 = 550.

Answer: 550 g

PRACTICE 6 problems

1 Convert 2.5 kg to grams.

ANSWER _____

2 Convert 4600 mL to liters.

ANSWER _____

3 Convert 3.25 lb to ounces.

ANSWER _____

4 Convert 88 oz to pounds.

ANSWER _____

5 Convert 1.5 gal to quarts.

ANSWER _____

6 Which is more, 9 qt or 2 gal? How much more is it in quarts?

ANSWER _____

APPLY IT Show your work

1 For a school movie night, you have 3 L of lemonade. You pour 450 mL into each of 4 bottles. How many milliliters are left?

WORK SPACE

ANSWER _____

2 For a pet shelter supply drive, you have 5 lb of dog treats. You fill 6 bags with 12 oz each. How many ounces of treats remain?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A club can ship at most 5 lb in one box. The box holds 3 prizes weighing 18 oz each and a container weighing 1.75 lb. Is the box within the limit? Explain how many ounces under or over it is.

WORK SPACE AND ANSWER

ANSWER KEY

Measure the Difference

GRADE 7 · 7.GM.3.1

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Convert 2.5 kg to grams.	**2500 g**
2	Convert 4600 mL to liters.	**4.6 L**
3	Convert 3.25 lb to ounces.	**52 oz**
4	Convert 88 oz to pounds.	**5.5 lb**
5	Convert 1.5 gal to quarts.	**6 qt**
6	Which is more, 9 qt or 2 gal? How much more is it in quarts?	**9 qt is more by 1 qt.**

PART 2 · APPLY IT

1. **1200 mL** Convert 3 L to 3000 mL. The bottles hold 4 x 450 = 1800 mL, leaving 3000 - 1800 = 1200 mL.
2. **8 oz** Convert 5 lb to 80 oz. The bags use 6 x 12 = 72 oz, leaving 80 - 72 = 8 oz.

CHALLENGE

The prizes weigh 3 x 18 = 54 oz, and the container weighs 1.75 x 16 = 28 oz. The total is 82 oz, which is 2 oz over the 80 oz limit.

Accept equivalent decimal or fraction forms with correct units. For the challenge, accept any clear conversion and comparison showing the box is 2 oz over the limit.