LESSON MAKER PRO

Metric Mission

Choose units, convert measures, and solve real problems.

GRADE 5 · 5.MG.1

5.MG.1 "The student will reason mathematically to solve problems, including those in context, that involve length, mass, and liquid volume using metric units..."

NAME _____ DATE _____

METRIC MEASURE MOVES

Choose a unit that fits the size of what you are measuring. Use metric facts such as 10 millimeters = 1 centimeter, 100 centimeters = 1 meter, 1,000 meters = 1 kilometer, 1,000 grams = 1 kilogram, and 1,000 milliliters = 1 liter. Change measurements to the same unit before you add or subtract.

WORKED EXAMPLE

A science tank holds 8 L. How many milliliters does it hold?

1. 1 L = 1,000 mL.
2. 8 groups of 1,000 mL = 8,000 mL.
3. The tank holds 8,000 mL.

Answer: 8,000 mL

PRACTICE 6 problems

1 The thickness of a coin is about 2 ___. Choose the best unit: millimeters, centimeters, meters, or kilometers.

ANSWER _____

2 Choose the best unit to measure the distance between two towns: millimeters, centimeters, meters, or kilometers.

ANSWER _____

3 A wire is 4,500 mm long. How many centimeters long is it?

ANSWER _____

4 A sack of potatoes has a mass of 6 kg. How many grams is that?

ANSWER _____

5 A package has a mass of 4,750 g. Write its mass in kilograms and grams.

ANSWER _____

6 A dispenser holds 3 L 625 mL of juice. How many milliliters is that?

ANSWER _____

APPLY IT Show your work

1 At basketball practice, a cooler holds 5 L of water. Seven players each fill a 650 mL bottle from the cooler. How much water is left in the cooler?

WORK SPACE

ANSWER _____

2 For a friendship-bracelet project, Mia has 2 m 70 cm of cord. She cuts it into 3 equal pieces. How long is each piece in centimeters?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A garden club collects 4 L 275 mL of rainwater on Monday and 2 L 950 mL on Tuesday. The club uses 3,725 mL to water plants. How much rainwater is left? Explain your reasoning.

_____

_____

ANSWER KEY

Metric Mission

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PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	The thickness of a coin is about 2 ___. Choose the best unit: millimeters, centimeters, meters, or kilometers.	**millimeters**
2	Choose the best unit to measure the distance between two towns: millimeters, centimeters, meters, or kilometers.	**kilometers**
3	A wire is 4,500 mm long. How many centimeters long is it?	**450 cm**
4	A sack of potatoes has a mass of 6 kg. How many grams is that?	**6,000 g**
5	A package has a mass of 4,750 g. Write its mass in kilograms and grams.	**4 kg 750 g**
6	A dispenser holds 3 L 625 mL of juice. How many milliliters is that?	**3,625 mL**

PART 2 · APPLY IT

1. **450 mL** Change 5 L to 5,000 mL. The players use 7 groups of 650 mL, or 4,550 mL, so 450 mL remains.
2. **90 cm** Change 2 m 70 cm to 270 cm. Divide 270 cm by 3 to get 90 cm.

CHALLENGE

3 L 500 mL. Change the collected amounts to 4,275 mL and 2,950 mL, then add to get 7,225 mL. Subtract 3,725 mL to get 3,500 mL, which is 3 L 500 mL.

Accept equivalent metric forms when the requested unit allows them. For the challenge, accept 3,500 mL as equivalent to 3 L 500 mL.