

Measure It Out

Use operations to solve real measurement problems.

GRADE 4 • NY-4.MD.2

NY-4.MD.2 "Use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money."

NAME _____

DATE _____

CHOOSE AN OPERATION

Read carefully to find what is changing and what you need to find. Keep measurement units alike before you add or subtract, and use multiplication for equal groups or division for equal shares.

WORKED EXAMPLE

Eleven paper cups each hold 130 mL of water. How many milliliters do the cups hold altogether?

1. Break 130 into $100 + 30$.
2. Multiply: $11 \times 100 = 1,100$ and $11 \times 30 = 330$.
3. Add: $1,100 + 330 = 1,430$.

Answer: 1,430 mL

PRACTICE 6 problems

- 1** A delivery has a 2 kg 300 g box and a 1 kg 700 g box. What is the total mass in grams?

ANSWER _____

- 2** A 5 L jug fills 10 equal bottles. How many milliliters are in each bottle? Use 1 L = 1,000 mL.

ANSWER _____

- 3** Practice starts at 8:25 and ends at 9:10. How long is practice?

ANSWER _____

- 4** Kai rides 9 miles each day for 7 days. How many miles does Kai ride in all?

ANSWER _____

- 5** Jada pays with a \$20 bill for 3 notebooks that cost \$4 each. How much change does she get?

ANSWER _____

- 6** A tank holds 3 gallons of water. How many quarts is that? Use 1 gallon = 4 quarts.

ANSWER _____

APPLY IT Show your work

- 1** A robotics club has 8 sensor packs that weigh 250 g each. The club also has a controller that weighs 1 kg. What is the total mass of the sensor packs and controller in grams?

WORK SPACE

ANSWER _____

- 2** A library gaming event runs from 1:00 to 3:30. There are 3 equal game rounds and 2 breaks that last 15 minutes each. How long is each game round?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A science club needs 6 L of water for an experiment. It has 4 bottles with 800 mL in each bottle and 2 bottles with 1 L in each bottle. How many more milliliters of water does the club need?

WORK SPACE AND ANSWER

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	A delivery has a 2 kg 300 g box and a 1 kg 700 g box. What is the total mass in grams?	4,000 g
2	A 5 L jug fills 10 equal bottles. How many milliliters are in each bottle? Use 1 L = 1,000 mL.	500 mL
3	Practice starts at 8:25 and ends at 9:10. How long is practice?	45 minutes
4	Kai rides 9 miles each day for 7 days. How many miles does Kai ride in all?	63 miles
5	Jada pays with a \$20 bill for 3 notebooks that cost \$4 each. How much change does she get?	\$8
6	A tank holds 3 gallons of water. How many quarts is that? Use 1 gallon = 4 quarts.	12 quarts

PART 2 • APPLY IT

1. **3,000 g** Multiply 8×250 to get 2,000 g for the packs. Add 1,000 g for the controller.
2. **40 minutes** The event lasts 150 minutes, and the breaks use 30 minutes. Divide the remaining 120 minutes by 3 rounds.

CHALLENGE

800 mL

Accept correctly written equivalent time answers, such as 45 min. For mass and volume questions, accept only answers with the requested unit or a clearly equivalent converted amount.