

Mass and Volume Math

Use grams, kilograms, and liters to solve one-step problems.

GRADE 3 • 3.MD.A.2

CCSS.Math.Content.3.MD.A.2 "Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). 1 Add, subtract, multiply..."

NAME _____

DATE _____

CHOOSE THE OPERATION

Use the same unit when you add, subtract, multiply, or divide masses and liquid volumes. Add to find a total, subtract to find how much more or less, multiply equal groups, and divide equal shares.

WORKED EXAMPLE

A bag of rice has a mass of 325 g. A bag of beans has a mass of 140 g. What is their total mass?

1. Both masses are measured in grams.
2. Add: $325 + 140 = 465$.
3. Write the unit: 465 g.

Answer: 465 g

PRACTICE 6 problems

1 $650 \text{ g} + 230 \text{ g} = ?$

ANSWER _____

2 $900 \text{ g} - 275 \text{ g} = ?$

ANSWER _____

3 Four bottles hold 2 l each. How many liters do the bottles hold altogether?

ANSWER _____

4 18 l of water is shared equally among 3 buckets. How many liters are in each bucket?

ANSWER _____

5 $7 \text{ kg} + 5 \text{ kg} = ?$

ANSWER _____

6 36 kg of pet food is packed equally into 6 boxes. How many kilograms are in each box?

ANSWER _____

APPLY IT Show your work

- 1** At a school carnival, Maya fills a lemonade cooler with 12 l of lemonade. She pours in 7 l more. How many liters of lemonade are in the cooler now?

WORK SPACE

ANSWER _____

- 2** A video game club packs 4 prize bags. Each bag has 250 g of trading cards. What is the total mass of the trading cards?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

A cooler has 15 l of juice shared equally among 3 pitchers. Sam says each pitcher gets 4 l. Is Sam correct? Explain using a multiplication fact.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	$650\text{ g} + 230\text{ g} = ?$	880 g
2	$900\text{ g} - 275\text{ g} = ?$	625 g
3	Four bottles hold 2 l each. How many liters do the bottles hold altogether?	8 l
4	18 l of water is shared equally among 3 buckets. How many liters are in each bucket?	6 l
5	$7\text{ kg} + 5\text{ kg} = ?$	12 kg
6	36 kg of pet food is packed equally into 6 boxes. How many kilograms are in each box?	6 kg

PART 2 • APPLY IT

- 19 l** Add the liters in the cooler: $12 + 7 = 19$. The cooler now has 19 l.
- 1,000 g** Multiply the mass in each equal bag: $4 \times 250 = 1,000$. The trading cards have a total mass of 1,000 g.

CHALLENGE

No. Each pitcher gets 5 l because $3 \times 5 = 15$.

Accept answers that include the correct unit, g, kg, or l. For the challenge, accept any explanation showing that $3 \times 5 = 15$, so 5 l is the equal share.