LESSON MAKER PRO

Measure and Solve

Solve problems with liters, grams, and kilograms.

GRADE 3 · 3.M.A.19

3.M.A.19 "Estimate and measure liquid volumes and masses of objects using liters (l), grams (g), and kilograms (kg). a. Use the four operations to solve one-step word problems involving masses or volumes given in the same metric units."

NAME _____ DATE _____

CHOOSE AN OPERATION

Keep the unit the same when you calculate with masses or liquid volumes. Add to join amounts, subtract to find what is left, multiply equal groups, and divide to share equally.

WORKED EXAMPLE

One pitcher holds 8 l of juice. Another holds 6 l. How many liters of juice do they hold in all?

1. The question asks for the total, so add.
2. 8 l + 6 l = 14 l.

Answer: 14 l

PRACTICE 6 problems

1 A bag has 23 g of blue beads and 15 g of red beads. What is the mass of all the beads?

ANSWER _____

2 A school collected 54 kg of books and gave away 19 kg. How many kilograms of books are left?

ANSWER _____

3 Four buckets each hold 3 l of water. How many liters do the buckets hold altogether?

ANSWER _____

4 A student shares 45 g of beads equally among 9 packets. How many grams go in each packet?

ANSWER _____

5 An aquarium has 27 l of water. You add 18 l more. How many liters of water are in it now?

ANSWER _____

6 A pile has 71 kg of sand. Workers move 29 kg into a sandbox. How many kilograms remain in the pile?

ANSWER _____

APPLY IT Show your work

1 For an art show, a club makes 3 clay displays. Each display uses 125 g of clay. How many grams of clay does the club use?

WORK SPACE

ANSWER _____

2 At a school fair, five teams share 55 l of water equally for a water balloon game. How many liters does each team get?

WORK SPACE

ANSWER _____

CHALLENGE One step up

A class collects 196 g of bottle caps on Monday and 203 g on Tuesday. Mia estimates the total mass is 400 g. Is her estimate reasonable? Find the exact mass and explain your answer in two sentences.

WORK SPACE AND ANSWER

Measure and Solve

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A bag has 23 g of blue beads and 15 g of red beads. What is the mass of all the beads?	**38 g**
2	A school collected 54 kg of books and gave away 19 kg. How many kilograms of books are left?	**35 kg**
3	Four buckets each hold 3 l of water. How many liters do the buckets hold altogether?	**12 l**
4	A student shares 45 g of beads equally among 9 packets. How many grams go in each packet?	**5 g**
5	An aquarium has 27 l of water. You add 18 l more. How many liters of water are in it now?	**45 l**
6	A pile has 71 kg of sand. Workers move 29 kg into a sandbox. How many kilograms remain in the pile?	**42 kg**

PART 2 · APPLY IT

1. **375 g** Multiply the mass for one display by 3: 125 g × 3 = 375 g.
2. **11 l** Divide the total volume by 5 teams: 55 l / 5 = 11 l per team.

CHALLENGE

Yes, 400 g is reasonable because 196 g and 203 g are both close to 200 g. The exact mass is 196 g + 203 g = 399 g.

Accept equivalent equations with the correct units. For the challenge, accept other explanations that show why 400 g is a reasonable estimate and give the exact total of 399 g.