LESSON MAKER PRO

Measure Mission

Convert, combine, and compare time and metric measures.

GRADE 4 · 4.MDR.6.1

4.MDR.6.1 "Use the four operations to solve problems involving elapsed time to the nearest minute, intervals of time, metric measurements of liquid volumes, lengths, distances, and masses of objects..."

NAME _____ DATE _____

MATCH THE UNITS

Use equivalent units to make measurements easier to combine. To change a larger metric unit into a smaller unit, multiply. To change a smaller unit into a larger unit, divide, and add or subtract fractions only when their denominators match.

WORKED EXAMPLE

A water tank holds 7 L. How many milliliters does it hold?

1. 1 L = 1,000 mL.
2. Multiply 7 by 1,000.
3. 7 × 1,000 = 7,000.

Answer: 7,000 mL

PRACTICE 6 problems

1 A ribbon is 650 cm long. Write its length in meters and centimeters.

ANSWER _____

2 A bag of birdseed has a mass of 8 kg 125 g. Write the mass in grams.

ANSWER _____

3 A pitcher holds 2 L 375 mL of juice. Write the volume in milliliters.

ANSWER _____

4 A jar has 3/8 kg of red beads and 2/8 kg of blue beads. What is the total mass of the beads?

ANSWER _____

5 A coding club begins at 1:18 PM and ends at 2:05 PM. How many minutes does the club last?

ANSWER _____

6 A runner jogs 3 km 450 m in the morning and 1,250 m in the afternoon. How many meters does the runner jog altogether?

ANSWER _____

APPLY IT Show your work

1 Maya's animation club starts at 3:25 PM and finishes at 4:50 PM. How many minutes does the club last?

WORK SPACE

ANSWER _____

2 A smoothie stand uses the amounts of juice shown in the table. How many milliliters of juice does it use altogether?

JUICE USED FOR SMOOTHIES

Juice	Amount
Apple juice	625 mL
Orange juice	850 mL
Grape juice	1 L

ANSWER _____

CHALLENGE One step up

A 1 L bottle is filled to 5/6 L. A science club uses 2/6 L each day for 2 days. How much liquid is left? Explain your reasoning with an equation.

WORK SPACE AND ANSWER

ANSWER KEY

Measure Mission

GRADE 4 · 4.MDR.6.1

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A ribbon is 650 cm long. Write its length in meters and centimeters.	**6 m 50 cm**
2	A bag of birdseed has a mass of 8 kg 125 g. Write the mass in grams.	**8,125 g**
3	A pitcher holds 2 L 375 mL of juice. Write the volume in milliliters.	**2,375 mL**
4	A jar has 3/8 kg of red beads and 2/8 kg of blue beads. What is the total mass of the beads?	**5/8 kg**
5	A coding club begins at 1:18 PM and ends at 2:05 PM. How many minutes does the club last?	**47 minutes**
6	A runner jogs 3 km 450 m in the morning and 1,250 m in the afternoon. How many meters does the runner jog altogether?	**4,700 m**

PART 2 · APPLY IT

1. **85 minutes** From 3:25 PM to 4:25 PM is 60 minutes. From 4:25 PM to 4:50 PM is 25 more minutes, so the total is 85 minutes.
2. **2,475 mL** Change 1 L to 1,000 mL. Then add 625 + 850 + 1,000 to get 2,475 mL.

CHALLENGE

1/6 L; 5/6 - (2 × 2/6) = 5/6 - 4/6 = 1/6 L

Accept equivalent unit names and correctly placed commas in whole-number answers. For the challenge, accept a correct explanation that multiplies 2/6 L by 2 before subtracting.