Lesson 5 Practice Problems

Problem 1

Mai and Priya were on scooters. Mai traveled 15 meters in 6 seconds. Priya travels 22 meters in 10 seconds. Who was moving faster? Explain your reasoning.

Possible Solutions

Mai's scooter is faster. $22 \div 10 = 2.2$, so Priya's scooter travels at a rate of 2.2 meters per second. $15 \div 6 = 2.5$, so Mai's scooter travels at a rate of 2.5 meters per second.

Problem 2

Here are the prices for cans of juice that are the same brand and the same size at different stores. Which store offers the best deal? Explain your reasoning.

Store X: 4 cans for $2.48

Store Y: 5 cans for $3.00

Store Z: 59 cents per can

Possible Solutions

Store Z has the best deal. $2.48 \div 4 = 0.62$ or 62 cents per can. $3 \div 5 = 0.6$ or 60 cents per can. 59 cents is the least expensive of the 3 options.

Problem 3

Costs of homes can be very different in different parts of the United States.

a. A 450-square-foot apartment in New York City costs $540,000. What is the price per square foot? Explain or show your reasoning.

b. A 2,100-square-foot home in Cheyenne, Wyoming, costs $110 per square foot. How much does this home cost? Explain or show your reasoning.

Possible Solutions

a. $1,200 ($540,000 \div 450 = 1,200$)

b. $231,000 ($2,100 \cdot 110 = 231,000$)

Problem 4

From Grade 6, Unit 3, Lesson 4

Lesson 5 Practice Problems

There are 33.8 fluid ounces in a liter. There are 128 fluid ounces in a gallon. About how many liters are in a gallon?

a. 2

b. 3

c. 4

d. 5

Is your estimate larger or smaller than the actual number of liters in a gallon? Explain how you know.

Possible Solutions

C. Answers vary. Sample response: This estimate is too big: $4 \cdot 32 = 128$, so $4 \cdot (33.8)$ is larger than 128.

Problem 5

From Grade 6, Unit 3, Lesson 3

Diego is 165 cm tall. Andre is 1.7 m tall. Who is taller, Diego or Andre? Explain your reasoning.

Possible Solutions

Andre is taller. 1.7 m is 170 cm, and $170 > 165$.

Problem 6

From Grade 6, Unit 3, Lesson 2

Name an object that could be about the same length as each measurement.

a. 4 inches

b. 6 feet

c. 1 meter

d. 5 yards

e. 6 centimeters

f. 2 millimeters

g. 3 kilometers

Possible Solutions

Answers vary. Sample response:

a. Pencil

b. Ladder

c. Person's leg

d. Tablecloth

e. Insect

f. Grain of rice

g. Foot race

Lesson 6 Practice Problems

Problem 1

A pink paint mixture uses 4 cups of white paint for every 3 cups of red paint.

The table shows different quantities of red and white paint for the same shade of pink. Complete the table.

white paint (cups)	red paint (cups)
4	3
	1
1	
	4
5	

Possible Solutions

Equivalent values are also acceptable.

white paint (cups)	red paint (cups)
4	3
$\frac{4}{3}$	1
1	$\frac{3}{4}$
$\frac{16}{3}$	4
5	$\frac{15}{4}$

Problem 2

A farm lets you pick 3 pints of raspberries for $12.00.

a. What is the cost per pint?

b. How many pints do you get per dollar?

c. At this rate, how many pints can you afford for $20.00?

d. At this rate, how much will 8 pints of raspberries cost?

Possible Solutions

a. Each pint costs $\frac{12}{3}$ or $4.

b. You get $\frac{3}{12}$ or $\frac{1}{4}$ or 0.25 pints per dollar.

c. You can afford 5 pints, because $20 \div 4 = 5$ and $(0.25) \cdot 20 = 5$.

d. 8 pints will cost $32.00, because $8 \cdot 4 = 32$. Possible strategy:

pints of raspberries	cost in dollars
3	12
1	4
$\frac{1}{4}$	1
5	20
8	32

Problem 3

Han and Tyler are following a polenta recipe that uses 5 cups of water for every 2 cups of cornmeal.

- Han says, "I am using 3 cups of water. I will need $1\frac{1}{5}$ cups of cornmeal."
- Tyler says, "I am using 3 cups of cornmeal. I will need $7\frac{1}{2}$ cups of water."

Do you agree with either of them? Explain your reasoning.