LESSON MAKER PRO

Rate Detective

Find the amount for one.

GRADE 6 · 6.N.3.2

6.N.3.2 "Determine the unit rate for ratios."

NAME _____ DATE _____

THE BIG IDEA

A unit rate tells how much there is for one unit. Divide the first amount by the second amount, then write the answer with its units.

WORKED EXAMPLE

There are 24 cards in 4 boxes, with the same number in each box. How many cards are in one box?

1. Divide the number of cards by the number of boxes: 24 / 4.
2. 24 / 4 = 6.

Answer: 6 cards per box

PRACTICE 6 problems

1 A runner travels 45 meters in 9 seconds. Find the unit rate in meters per second.

ANSWER _____

2 Eight notebooks cost $28. Find the cost per notebook.

ANSWER _____

3 A cyclist travels 14 kilometers in 2 hours. Find the unit rate in kilometers per hour.

ANSWER _____

4 A machine prints 15 posters in 10 minutes. Find the unit rate in posters per minute.

ANSWER _____

5 Nine cups of paint cover 12 square meters. Find the unit rate in cups per square meter.

ANSWER _____

6 A club shares 96 game tokens equally among 12 players. Find the unit rate in tokens per player.

ANSWER _____

APPLY IT Show your work

1 At a school game night, one snack stand sells 10 pretzels for $25. Another sells 8 pretzels for $18. Find the price per pretzel at each stand. Which stand costs less per pretzel?

WORK SPACE

ANSWER _____

2 A gaming club earns 105 points in 15 rounds. At the same rate, how many points will it earn in 9 rounds?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Maya bikes 7/2 miles in 1/2 hour. Leo bikes 9 miles in 2 hours. Who bikes faster, and by how many miles per hour? Show both unit rates.

WORK SPACE AND ANSWER

ANSWER KEY # Rate Detective

GRADE 6 · 6.N.3.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A runner travels 45 meters in 9 seconds. Find the unit rate in meters per second.	**5 meters per second**
2	Eight notebooks cost $28. Find the cost per notebook.	**$3.50 per notebook**
3	A cyclist travels 14 kilometers in 2 hours. Find the unit rate in kilometers per hour.	**7 kilometers per hour**
4	A machine prints 15 posters in 10 minutes. Find the unit rate in posters per minute.	**1.5 posters per minute**
5	Nine cups of paint cover 12 square meters. Find the unit rate in cups per square meter.	**0.75 cup per square meter**
6	A club shares 96 game tokens equally among 12 players. Find the unit rate in tokens per player.	**8 tokens per player**

PART 2 · APPLY IT

1. **First stand: $2.50 per pretzel. Second stand: $2.25 per pretzel. The second stand costs less per pretzel.** Divide $25 by 10 and $18 by 8. Compare $2.50 and $2.25.
2. **63 points** Divide 105 by 15 to get 7 points per round. Multiply 7 by 9 to get 63 points.

CHALLENGE

Maya: (7/2) / (1/2) = 7 miles per hour. Leo: 9 / 2 = 4.5 miles per hour. Maya bikes 2.5 miles per hour faster.

Accept equivalent fractions or decimals for unit rates when the units are correct. In the challenge, accept 9/2 miles per hour for Leo and 5/2 miles per hour for the difference.