LESSON MAKER PRO

# Rate Quest

*Find, compare, and use unit rates.*

**GRADE 6 · MA.6.AR.3.5**

**MA.6.AR.3.5** "Solve mathematical and real-world problems involving ratios, rates and unit rates, including comparisons, mixtures, ratios of lengths and conversions within the same measurement system."

NAME _____ DATE _____

## FIND THE UNIT RATE

A unit rate tells how much there is for 1 unit. Divide the total amount by the number of units. When you compare rates, use matching units, and convert lengths to the same unit before making a ratio.

**WORKED EXAMPLE**

A box holds 32 markers in 4 equal rows. How many markers are in each row?

1. Write the division: 32 / 4.
2. Divide: 32 / 4 = 8.
3. Each row has the same number of markers.

**Answer: 8 markers per row**

## PRACTICE 6 problems

**1** A student reads 54 pages in 6 days. What is the unit rate?

**ANSWER** _____

**2** Two movie tickets cost $18. What is the cost per ticket?

**ANSWER** _____

**3** Maya rides 21 miles in 3 hours. Devon rides 36 miles in 6 hours. Who has the greater speed, and by how much?

**ANSWER** _____

**4** How many inches are in 6 feet?

**ANSWER** _____

**5** A paint mix uses 2 cups of yellow paint for every 9 cups of blue paint. How many cups of paint are in one batch?

**ANSWER** _____

**6** A baker puts 27 ounces of dough into 3 equal containers. How many ounces are in each container?

**ANSWER** _____

## APPLY IT Show your work

**1** For a school game night, a snack mix uses 3 cups of popcorn for every 6 cups of pretzels. The club wants 27 cups of snack mix. How many cups of popcorn and pretzels are needed?

WORK SPACE

**ANSWER** _____

**2** During a reading challenge, Jalen reads 42 pages in 6 days. Priya reads 45 pages in 5 days. Who has the greater daily reading rate, and how many more pages per day does that student read?

WORK SPACE

**ANSWER** _____

## CHALLENGE One step up

A stage banner has two ribbon pieces. One piece is 2 feet 9 inches long, and the other is 39 inches long. Write the ratio of the first ribbon length to the second ribbon length in simplest form. Explain your reasoning.

WORK SPACE AND ANSWER

**ANSWER KEY**

# Rate Quest

**GRADE 6 · MA.6.AR.3.5**

## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | A student reads 54 pages in 6 days. What is the unit rate? | **9 pages per day** |
| 2 | Two movie tickets cost $18. What is the cost per ticket? | **$9 per ticket** |
| 3 | Maya rides 21 miles in 3 hours. Devon rides 36 miles in 6 hours. Who has the greater speed, and by how much? | **Maya, by 1 mile per hour** |
| 4 | How many inches are in 6 feet? | **72 inches** |
| 5 | A paint mix uses 2 cups of yellow paint for every 9 cups of blue paint. How many cups of paint are in one batch? | **11 cups** |
| 6 | A baker puts 27 ounces of dough into 3 equal containers. How many ounces are in each container? | **9 ounces per container** |

## PART 2 · APPLY IT

1. **9 cups of popcorn and 18 cups of pretzels** The ratio has 9 total parts. Since 27 / 9 = 3, multiply both ratio parts by 3.
2. **Priya, 2 more pages per day** Jalen reads 7 pages per day, and Priya reads 9 pages per day. Compare 9 to 7.

## CHALLENGE

**11:13. The first ribbon is 33 inches, so the ratio is 33:39. Divide both terms by 3.**

Accept equivalent unit-rate wording, such as "$9 each" for problem 2. For ratios, accept an equivalent ratio only if it is simplified when the prompt asks for simplest form.