

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: $32 \div 4$.
2. Divide: $32 \div 4 = 8$.
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

CHALLENGE

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.

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

- 9 cups of popcorn and 18 cups of pretzels** The ratio has 9 total parts. Since $27 \div 9 = 3$, multiply both ratio parts by 3.
- 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.