

Rate Match Mission

Use unit rates to solve proportional situations.

GRADE 7 • MA.7.AR.4.5

MA.7.AR.4.5 "Solve real-world problems involving proportional relationships."

NAME _____

DATE _____

FIND THE UNIT RATE

In a proportional relationship, each group has the same unit rate. Divide to find the rate for one unit, then multiply by the amount you need.

WORKED EXAMPLE

11 snack packs cost \$88. What do 4 snack packs cost?

1. Find the cost per pack: $88 \div 11 = 8$.

2. Multiply by 4 packs: $8 \times 4 = 32$.

Answer: \$32

PRACTICE 6 problems

- 1** 5 smoothies cost \$10. At the same price, how much do 15 smoothies cost?

ANSWER _____

- 2** A scooter travels 18 miles in $\frac{3}{5}$ hour at a constant rate. How many miles does it travel in 1 hour?

ANSWER _____

- 3** A recipe uses 9 cups of flour for 15 batches. How many cups of flour are used per batch?

ANSWER _____

- 4** For $y = 5x$, find y when $x = 13$.

ANSWER _____

- 5** On a map, 3 cm represents 18 km. How many kilometers does 5 cm represent?

ANSWER _____

- 6** Game tokens cost \$3 each. Write an equation for total cost y when x tokens are bought.

ANSWER _____

APPLY IT Show your work

- 1** At a school concert, 3 glow wristbands cost \$15. Jordan buys wristbands for 9 friends. If every wristband costs the same, how much will Jordan spend?

WORK SPACE

ANSWER _____

- 2** An online game downloads 30% of its update in 18 minutes at a constant rate. How long will it take to download 75% of the update?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

At an arcade, Deal A charges \$15 for 5 game cards. Deal B charges \$27 for 9 game cards. Are the deals proportional at the same cost per card? Explain using unit rates.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	5 smoothies cost \$10. At the same price, how much do 15 smoothies cost?	\$30
2	A scooter travels 18 miles in $\frac{3}{5}$ hour at a constant rate. How many miles does it travel in 1 hour?	30 miles per hour
3	A recipe uses 9 cups of flour for 15 batches. How many cups of flour are used per batch?	$\frac{3}{5}$ cup per batch
4	For $y = 5x$, find y when $x = 13$.	65
5	On a map, 3 cm represents 18 km. How many kilometers does 5 cm represent?	30 km
6	Game tokens cost \$3 each. Write an equation for total cost y when x tokens are bought.	$y = 3x$

PART 2 • APPLY IT

1. **\$45** Each wristband costs $\$15 \div 3 = \5 . Multiply \$5 by 9 wristbands to get \$45.
2. **45 minutes** The time per percent is $18 \div 30$ minutes. Multiply by 75% to get 45 minutes.

CHALLENGE

Yes. Deal A costs \$3 per card, and Deal B costs \$3 per card.

Accept equivalent unit-rate language with correct units. For the equation, accept $y = 3x$ when y represents total cost and x represents the number of tokens.