Rate Match Mission

Use unit rates to solve proportional situations.

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 / 11 = 8.
2. Multiply by 4 packs: 8 x 4 = 32.

$32

1. Practice

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

2. Practice

A scooter travels 18 miles in 3/5 hour at a constant rate. How many miles does it travel in 1 hour?

3. Practice

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

4. Practice

For y = 5x, find y when x = 13.

5. Practice

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

6. Practice

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

7. Apply

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?

8. Apply

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?

9. 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.

What to accept

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.

1. Practice

$30

2. Practice

30 miles

3. Practice

3/5 cup per batch

4. Practice

65

5. Practice

30 km

6. Practice

y = 3x

7. Apply

$45

Each wristband costs $15 / 3 = $5. Multiply $5 by 9 wristbands to get $45.

8. Apply

45 minutes

The time per percent is 18 / 30 minutes. Multiply by 75% to get 45 minutes.

9. Challenge

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