Rate Table Detective

Use a unit rate to complete proportional pairs.

6.PFA.2.b · Determine a missing value in a ratio table that represents a proportional relationship between two quantities using a unit rate.

Name _____ Date _____

Find the Unit Rate

In a proportional ratio table, divide one quantity by its matching quantity to find a unit rate, such as dollars per item. Multiply the unit rate by the new number of items to find the missing value.

Worked example

A smoothie shop uses 18 strawberries for 3 smoothies. At the same rate, how many strawberries are needed for 7 smoothies?

1. Divide 18 by 3 to find the unit rate: 18 / 3 = 6 strawberries per smoothie.
2. Multiply by 7 smoothies: 6 x 7 = 42 strawberries.

42 strawberries

1. Practice

The quantities are proportional. Find the missing value in this table and show your method.

Tickets	Dollars
5	20
8	

2. Practice

The quantities are proportional. Find the missing value in this table and show your method.

Ribbon (m)	Dollars
6	30
11	

3. Practice

The quantities are proportional. Find the missing value in this table and show your method.

Minutes	Pages
4	16
9	

4. Practice

The quantities are proportional. Find the missing value in this table and show your method.

Gallons	Miles
1	17
12	

5. Practice

The quantities are proportional. Find the missing value in this table and show your method.

Keychains	Beads
6	24
10	

6. Practice

The quantities are proportional. Find the missing value in this table and show your method.

Bottles	Fluid ounces
11	22
14	

7. Apply

A music app uses the same number of megabytes for each song download. Use the table to find x.

Music App Downloads

Songs Downloaded	Megabytes Used
5	45
12	x

8. Apply

At a gaming tournament, a team earns 56 points in 8 rounds. If the team earns points at the same rate for 15 rounds, how many points will it earn?

9. Challenge

A food truck's prices are proportional. Nine wraps cost $54. Maya says 14 wraps cost $72 because 14 is 5 more than 9. Is Maya correct? Explain using the unit rate, then give the cost of 14 wraps.

What to accept

Accept equivalent numerical forms with correct units. For the challenge, accept any explanation that finds $6 per wrap and shows that 14 wraps cost $84.

1. Practice

$32

Tickets	Dollars
5	20
8	32

2. Practice

$55

Ribbon (m)	Dollars
6	30
11	55

3. Practice

36 pages

Minutes	Pages
4	16
9	36

4. Practice

204 miles

Gallons	Miles
1	17
12	204

5. Practice

40 beads

Keychains	Beads
6	24
10	40

6. Practice

28 fluid ounces

Bottles	Fluid ounces
11	22
14	28

7. Apply

108 megabytes

Divide 45 by 5 to find 9 megabytes per song. Multiply 9 by 12 to get 108 megabytes.

8. Apply

105 points

Divide 56 by 8 to find 7 points per round. Multiply 7 by 15 to get 105 points.

9. Challenge

No. The unit rate is $6 per wrap, so 14 wraps cost 14 x $6 = $84.