Rate Quest

Divide to find a rate for one unit.

6.4.D · give examples of rates as the comparison by division of two quantities having different attributes, including rates as quotients;

Name _____ Date _____

FIND THE UNIT RATE

A rate compares two quantities with different attributes, such as miles and hours. To find a unit rate, divide the first quantity by the second quantity so the second quantity becomes 1. Include units in your answer.

Worked example

A bike travels 42 miles in 6 hours. What is its unit rate?

1. Write the rate: 42 miles / 6 hours.
2. Divide: 42 / 6 = 7.
3. Attach units: 7 miles per hour.

7 miles per hour

1. Practice

A printer makes 36 flyers in 4 minutes. What is the unit rate in flyers per minute?

2. Practice

A $24 game pass covers 3 months. What is the unit rate in dollars per month?

3. Practice

A student reads 30 pages in 2 days. What is the unit rate in pages per day?

4. Practice

Sixteen fluid ounces of juice fill 4 small drinking containers equally. What is the rate in fluid ounces per container?

5. Practice

A soccer team scores 27 goals in 3 games. What is the unit rate in goals per game?

6. Practice

Create your own example of a rate comparing two different attributes. Give quantities and units, write their quotient, and find the unit rate. Explain what it means.

7. Apply

At a gaming tournament, a team earns 256 points from 32 completed quests. If the team keeps the same points-per-quest rate, how many points will it earn from 5 more quests?

8. Apply

Mina uploads 54 photos over 3 days for the school news site. If she uploads at the same rate for 8 days, how many photos will she upload?

9. Challenge

Channel A gets 45 likes in 3 hours. Channel B gets 64 likes in 4 hours. Which channel gains likes faster, and by how many more likes per hour? Explain using unit rates.

What to accept

Accept equivalent unit-rate notation, such as flyers/minute or flyers per minute. For the challenge, students should show both unit rates and state the difference.

1. Practice

9 flyers per minute

2. Practice

8 dollars per month

3. Practice

15 pages per day

4. Practice

4 fluid ounces per container

5. Practice

9 goals per game

6. Practice

Answers vary. Example: 12 pages in 3 minutes; 12 pages / 3 minutes = 4 pages per minute. Distinct attributes and correct quotient units are required.

7. Apply

40 points

Divide 256 by 32 to find 8 points per quest. Multiply 8 by 5 to get 40 points.

8. Apply

144 photos

Divide 54 by 3 to find 18 photos per day. Multiply 18 by 8 to get 144 photos.

9. Challenge

Channel B gains likes faster. Channel A gains 15 likes per hour, and Channel B gains 16 likes per hour, so Channel B gains 1 more like per hour.