LESSON MAKER PRO

Rate Detectives

Find the amount for one unit.

6.PFA.2.a · Identify the unit rate of a proportional relationship represented by a table of values, a contextual situation, or a graph.

Name _____ Date _____

Find the Unit Rate

In a proportional relationship, divide the output by the input to find the amount for 1 unit. For example, if 11 sketchbooks cost 33 dollars, divide 33 by 11 to find 3 dollars per sketchbook.

Worked example

The point on the number line shows total earnings after 4 hours of pet sitting. What is the unit rate?

1. Find the total earnings at the marked point: 28 dollars.
2. Divide total earnings by hours: 28 / 4 = 7.
3. Write the rate for 1 hour.

7 dollars per hour



1. Practice

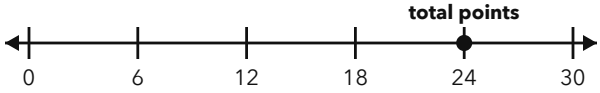
A table shows that 3 hours of reading earns 15 points, 6 hours earns 30 points, and 9 hours earns 45 points. What is the unit rate?

2. Practice

A cyclist travels 18 miles in 3 hours at a constant rate. What is the unit rate?

3. Practice

The number line shows a player's total points after 3 games. What is the unit rate?



4. Practice

A proportional relationship includes the pairs (2, 18), (5, 45), and (9, 81). Find the unit rate, y/x.

5. Practice

A table shows x-values of 6, 8, and 10 and y-values of 30, 40, and 50. What is the unit rate, y/x?

6. Practice

Six equal packs contain 54 trading cards altogether. What is the unit rate?

7. Apply

A music app downloads songs at a steady rate. Use the table to find the unit rate in songs per minute.

Song Downloads

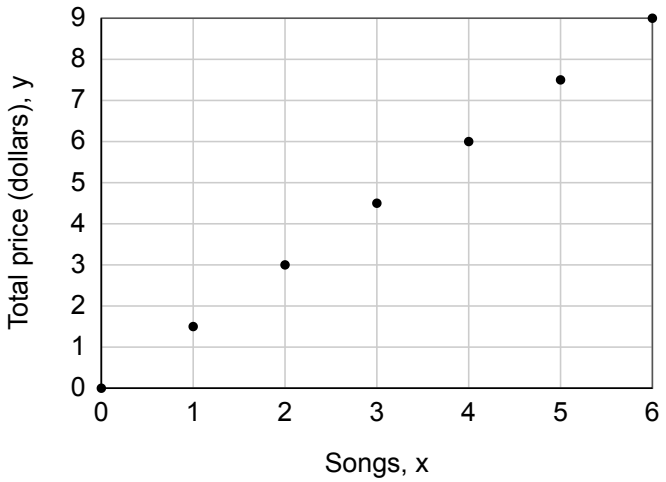
Time (minutes)	Songs downloaded
3	18
6	36
9	54

8. Apply

The robotics club buys 45 LEDs to make 5 identical light kits. Each kit has the same number of LEDs. How many LEDs are in each kit?

9. Challenge

The graph shows the total price y, in dollars, for x songs. What is the unit rate in dollars per song? Explain how one point on the graph proves your answer. Each point represents a whole number of songs.



What to accept

Accept equivalent unit-rate forms with correct units. For the challenge, accept 1.5 dollars per song and any correct explanation using a plotted point.

1. Practice

5 points per hour

2. Practice

6 miles per hour

3. Practice

8 points per game

4. Practice

9

5. Practice

5

6. Practice

9 trading cards per pack

7. Apply

6 songs per minute

Divide songs downloaded by time: 18 / 3 = 6. The other rows give the same quotient.

8. Apply

9 LEDs per kit

Divide the total number of LEDs by the number of kits: 45 / 5 = 9.

9. Challenge

3/2 dollars per song. For example, the point (2, 3) shows that 3 / 2 = 3/2 dollars per song.