

Grade 6 - Unit Rates and Rate Language - Lesson

Common Core 6.RP.A.2, 6.RP.A.3b · maths-pdf.fr/en/

This **grade 6 unit rates lesson** for 6th Grade covers unit rates and rate language (Common Core 6.RP.A.2, 6.RP.A.3b), with a free PDF to print.

A unit rate compares a quantity to one unit of another quantity, such as 55 miles per hour or \$3 per pound. To find it, divide the first quantity by the second. For example, 330 miles in 6 hours is 330 divided by 6, or 55 miles per hour. Unit rates make fair comparisons and solve scaling problems.

Grade 6 · Common Core State Standards: **6.RP.A.2, 6.RP.A.3b**

Key facts in this grade 6 unit rates lesson

Key facts

- A unit rate has 1 in the second quantity, such as miles per 1 hour.
- Divide the first quantity by the second to find a unit rate.
- The word per means for each one.
- The lower unit price is the better buy when units match.
- Distance = rate x time at a constant speed.

What is a rate and a unit rate?

A **rate** is a ratio that compares two quantities with different units, like miles and hours or dollars and pounds. When the second quantity is 1, the rate is a **unit rate**.

Unit rate

A **unit rate** compares a quantity to 1 unit of another quantity. For a rate of a units to b units with $b \neq 0$, the unit rate is $\frac{a}{b}$. The word *per* means "for each one."



Four pounds of oranges cost \$12, so one pound costs \$3.

How do you find a unit rate?

Divide the first quantity by the second. If a car goes 330 miles in 6 hours, divide $330 \div 6 = 55$. The speed is 55 miles per hour. You can also write it as a rate of $\frac{55 \text{ miles}}{1 \text{ hour}}$.

Miles	55	55	55	55	55	55
Hours	1	1	1	1	1	1

A speed of 55 miles per hour: 6 hours cover 330 miles.

Rates work in both directions. The same car uses $6 \div 330$ hours per mile, but speeds are almost always written as miles per hour.

How do you use a unit rate to solve problems?



Divide to find the unit rate, then multiply to scale it.

1. Divide to find the unit rate.
2. Write the unit rate with its units, such as dollars per pound.
3. Multiply the unit rate by the new amount.
4. Check that the answer has the right units.

Example: Oranges cost \$12.00 for 4 pounds. The unit price is $\$12.00 \div 4 = \$3.00$ per pound. Ten pounds cost $\$3.00 \times 10 = \$30.00$.

How do you find the better buy?

Find the unit price of each option and compare. The lower price per unit is the better buy, as long as the quantities are in the same units.

Size	Price	Per ounce
10 oz	\$2.50	\$0.25
16 oz	\$3.52	\$0.22

The 16-ounce size has the lower price per ounce, so it is the better buy.

Unit rates can use fractions too. If a hiker walks $\frac{3}{4}$ mile in $\frac{1}{4}$ hour, her speed is $\frac{3}{4} \div \frac{1}{4} = 3$ miles per hour.

Grade 6 unit rates lesson: questions and answers

What is the difference between a rate and a unit rate?

A rate compares two quantities with different units, like 150 miles in 3 hours. A unit rate has 1 as the second quantity, like 50 miles per hour.

How do you calculate unit price?

Divide the total price by the number of units. If 5 pounds cost \$7.50, then 7.50 divided by 5 is \$1.50 per pound.

How do you compare unit rates?

Write each rate with the same units and compare the numbers. For prices the lower unit price is the better buy; for speed the higher speed is faster.

What does per mean in math?

Per means for each one, and it signals division. Miles per hour means the number of miles for each 1 hour.

How do you find distance from speed and time?

Multiply the speed by the time at a constant speed. At 55 miles per hour for 4 hours, the distance is 55 times 4, or 220 miles.

How to use this grade 6 unit rates lesson

Read the definitions first, then follow the worked method line by line and redo the example on paper without looking. When every step makes sense, move on to the worksheet, then check yourself with the quiz.

Download the grade 6 unit rates lesson as a PDF with the button below and keep it with your notes.