

**Study the following.**

rate (rayt) – a rate is a special ratio where quantities aren't measured the same way. It compares two different measurements like miles and hours. (The hiker traveled at a rate of 6 miles in 3 hours.)(He hammered at a rate of 20 nails in 3 minutes.)

unit (yoo-nit) – having to do with one of something. (This is a different definition than unit of measure.)

unit rate – a rate where the denominator (second number in the ratio) is always 1. (The unit rate was 8 crackers for each person. 8 to 1) (The bug moved at a unit rate of 6 inches in one minute. 6 to 1) You don't always say the 1. Say 40 miles per 1 hour or 40 miles per hour.

unit price (yoo-nit prisse) – a special type of unit rate. It is the price for one item (unit). (The unit price for crackers is \$3.00 for one box.) (The unit price is \$6.00 for a lasagna.)

per (pur) – for each, or in each. Per is used to express a rate. ( He ate two fish per meal.) (The car went 60 miles per hour.)

/ - a symbol for per (He ate 2 fish/meal.) (The car went 60 miles/hour.)

— - a symbol for per (He ate  $\frac{2 \text{ fish}}{\text{meal}}$  .) (The car went  $\frac{60 \text{ miles}}{\text{hour}}$  .)

**Say each word out loud and write it in the blank.**

rate \_\_\_\_\_  
unit \_\_\_\_\_  
price \_\_\_\_\_  
per \_\_\_\_\_

**Write each definition in your own words.**

rate

unit

unit rate

unit price

per

**Write 2 sentences using each word.**

rate

1.

2.

unit

1.

2.

unit rate

1.

2.

unit price

1.

2.

**Write 3 examples of a rate.**

**Study the following.**

For a unit rate, you don't always say the 1. Say 40 miles per 1 hour or 40 miles per hour.

**Write 3 examples of a unit rate.**

**Write 3 examples of a unit price.**

**Write the following using the “/” symbol for per.**

1. 36 miles per 3 gallons
2. 12 eggs per carton
3. 3 pencils per 2 boxes

**Write the following using the — symbol for per.**

1. 8 slices for 3 boys
2. 42 books in a box
3. 6 classes in 8 hours

**Matching.**

rate	it is the price for one item (unit).
unit	a special ratio where quantities aren't measured the same way
unit rate	a symbol for per
unit price	a symbol for per
/	a rate where the denominator (second number in the ratio) is always 1.
—	having to do with one of something

**Study the following.**

Rates are often related to time or money.

Examples of time: 80 feet/sec  
25 letters/3 hours  
6 hours/person

Examples of money: \$7.00 per 3 hours  
\$10/8 pencils  
3 pencils/dollar  
1 peach/15 cents

Examples of money that are unit rates (unit price): \$2.00/box  
\$3.50/sandwich  
\$.15/apple

**Write 5 examples of rates related to time.**

**Write 5 examples of rates related to money.**

**Write 5 examples of unit prices.**

**Study the following.**

To change from a rate to a unit rate, divide the numerator by the denominator. Rates are fractions, so they can be treated like them. Keep the units with the “per” symbol or word, between them.

Examples: 1. 30 miles/3 gallons

$$30 \div 3 = 10 \quad \text{answer is 10 miles/gallon} \\ \text{or 10 miles per gallon}$$

2. 18 letters in 7 hours

$$18 \div 7 = 2.6 \text{ (rounded to tenths)} \quad \text{answer is 2.6 letters/hour} \\ \text{or 2.6 letters per hour}$$

1. \$12 for 5 rolls

$$\$12 \div 5 = \$2.40 \quad \text{answer is \$2.40/roll (a unit price)} \\ \text{or \$2.40 per roll}$$

**Change to a unit rate.**

**Round to the tenths place if needed, or for money, round to cents.**

1. 9bags/3 boxes
2. 10 feet to 4 minutes
3. 25 candy bars : 5 bags
4. 16 students/4 groups
5. 300 miles/6 hours
6. \$6.00/3 pens
7. \$18 per 2 notebooks
8. 80 pounds in 12 days
9. 1 plum/.50 dollars
10. 3 cars/6 minutes
11. \$5.00/4 cookies
12. 70 miles/7 gallons

**Which answers above, are unit prices?**