

You need out your warm up & agenda

Homework: Unit Rates. CALCULATOR

Warm Up: NOT USING A CALCULATOR

1) Simplify: $\frac{56}{8} - 7$ 2) Simplify: $-3r + 5(-8r) - 2$


3) simplify: $\frac{4.7}{2}$

$$\begin{array}{r} 2.35 \\ 2 \overline{) 4.70} \\ \underline{4} \\ 7 \\ \underline{-6} \\ 10 \\ \underline{10} \\ 0 \end{array}$$

New Unit!!!

Unit 3- Ratios & Proportions

Don't be like this... Learn your unit rates!

 <https://www.youtube.com/watch?v=Qhm7-LEBznk>

http://www.pbslearningmedia.org/resource/muen-math-rp-unitrate/unit-rate/?utm_source=pinterest&utm_medium=socialmedia&utm_campaign=WGBHmktg_2014





Unit Rates- Notes

An 8 pack of coke costs \$4.26

How much does each coke cost?

$$\frac{\$}{\text{time}} \frac{\$4.26}{8} = \$1.87$$

This price is the unit cost, or the unit rate.

Unit: one

Rate: a ratio that compares 2 $\frac{\$4.26}{8 \text{ cokes}}$
different quantities

Unit Rate: rate that is simplified so $\frac{\$1.87}{1 \text{ coke}}$
the denominator is 1

$$\frac{\text{cals}}{\text{skittle}} \quad \frac{250}{30} \div \frac{8.\overline{3}}{1}$$

When finding unit rates, money is always on the top (num.) & time is always on the bottom (denom.)

$$\frac{\$}{\text{time}}$$

Julie bought 4 pounds of grapes for \$20. Find the unit price. (cost of 1 pound)

Rate: $\frac{\$20\text{dollars}}{4\text{pounds}}$ ← two different quantities (dollars & pounds) money in the numerator.
grapes

Unit Rate: $\frac{5\text{dollars}}{1\text{pound}}$ ← the denominator is 1 unit.

Talan biked 24 miles in 4 hours. If he biked at a constant speed, how many miles did he ride in 1 hour?

$$\frac{\text{miles}}{\text{hours}} = \frac{24\text{miles}}{4\text{hours}} \div * \text{We need } 1 \text{ as the denominator, so } \frac{24 \div 4}{4 \div 4} = \frac{6\text{miles}}{1\text{hour}}$$

Practice!

1) You earned \$300 in 6 hours. How much money did you make in 1 hour?

$$\frac{\$}{\text{time}} \quad \frac{300 \div 6}{6 \div 6} = \frac{\$50}{1 \text{ hr}}$$

2) You drove 220 miles in 8 hours. How many miles did you drive per hour?

$$\frac{m}{t} \quad \frac{\text{miles}}{\text{hr}} \quad \frac{220 \div 8}{8 \div 8} = \frac{27.5 \text{ miles}}{1 \text{ hr}}$$

3) Andrew bikes 160 km in 4 hours. How many km did he bike in 1 hour?

$$\frac{M}{t} \quad \frac{\text{Km}}{\text{hr}} \quad \frac{160 \div 4}{4 \div 4} = \frac{40 \text{ Km}}{1 \text{ hr}}$$

4) Find the unit price: It costs \$2 for 8 juice boxes.

$$\frac{m}{t} = \frac{\$}{JB} = \frac{2}{8} = \frac{x}{1}$$

$$\frac{8}{x} = \frac{2}{1}$$
$$x = .25$$

5) In the table below, which soup has the lowest unit price?

SIZE (OZ)	Cost (\$)
10	0.79
15	1.35
18	2.16
32	2.88

$$\frac{\$}{t} \text{ ① } \frac{\$.79}{02 \ 10} \quad \text{② } \frac{\$ 1.35}{02 \ 15} \quad \text{③ } \frac{\$ 2.16}{02 \ 18} \quad \text{④ } \frac{\$ 2.88}{02 \ 32}$$

$$.079 \quad 0.09\text{\$} \quad 0.12\text{\$} \quad 0.09$$

$$.08\text{\$} \quad 9\text{\$}$$

.3256
↻
.33¢

Unit Rates- Homework

1. You can buy 3 concert tickets for \$36. How much does 1 ticket cost?

2. Ben can type 153 words in 3 minutes. What is the unit rate?

3. You can travel 144 miles with 4.5 gallons. How many miles/gallon?

4. Your heart beats 120 beats per 2 minutes. What is your beats/minute?

5. Which relationship has a unit rate of 60 miles per hour?
 - a. 300 miles in 6 hours
 - b. 300 miles in 5 hours
 - c. 240 miles in 6 hours
 - d. 240 miles in 5 hours

There are 142 calories in 28 MnMs

cals/mnm



A 12-count chick fil a nugget box is 400 calories.



cals/nug

There are 140 calories in a bag of Doritos that contains about 11 chips.

cals/chip



There are 180 calories in 3 Oreo cookies.

cals/oreo

Nutrition Facts	
180 Calories from Fat 60%	
Amount Per Serving	
Calories 180 Calories from Fat 60	
	% Daily Value*
Total Fat 1g	2%
Saturated Fat 0g	0%
Trans Fat 0g	0%
Polysaturated Fat 0.5g	1%
Monounsaturated Fat 2.5g	5%
Cholesterol 0mg	0%
Sodium 70mg	1%
Potassium 10mg	0%
Total Carbohydrate 25g	5%
Dietary Fiber Less than 1g	2%

Unit Rates in the Real World-

The world's faster airplane can travel 6,579 miles in 3 hours.



m/hr

The world's fastest car the Hennessey Venom GT can travel at 1,080 miles in 4 hours.



m/hr

Closing:

5. Which relationship has a unit rate of 60 miles per hour?
- a. 300 miles in 6 hours
 - b. 300 miles in 5 hours
 - c. 240 miles in 6 hours
 - d. 240 miles in 5 hours

Josh can eat 6 burgers in 2 minutes. How many burgers can he eat per minute?

Gage can do 20 pushups in 5 seconds.

Damien can do 30 pushups in 6 seconds.

J
C
S

Sit silently for the news