

Name: _____

Lesson Guide

This lesson guide accompanies the following video lesson:



Ratios and Unit Rates in the Real World

A unit rate is a rate that is expressed as a quantity of _____.

Examples



Example 01: Find the unit rate.

A distance runner travels 16 miles in two hours.

1 2 3 4 5 6 7 8

9 10 11 12 13 14 15 16



My Answer: _____ miles for every 1 hour of running.

Example 02: Find the unit rate.

There are 108 students in 4 math classes.

1	10	19	28	37	46	55	64	73	82	91	100
2	11	20	29	38	47	56	65	74	83	92	101
3	12	21	30	39	48	57	66	75	84	93	102
4	13	22	31	40	49	58	67	76	85	94	103
5	14	23	32	41	50	59	68	77	86	95	104
6	15	24	33	42	51	60	69	78	87	96	105
7	16	25	34	43	52	61	70	79	88	97	106
8	17	26	35	44	53	62	71	80	89	98	107
9	18	27	36	45	54	63	72	81	90	99	108

My Answer: _____ students for every 1 math class, on average.

Example 03: Find the unit rate.

One-quarter pound of jelly beans costs \$1.75.



My Answer: Jelly beans cost \$ _____ per 1 pound.

Rate to Unit Rates

The following pairs of equivalent fractions represent the rates and unit rates for the last three examples:

Rate		Unit Rate		Rate		Unit Rate
$\frac{16 \text{ miles}}{2 \text{ hours}}$	=	$\frac{8 \text{ miles}}{1 \text{ hour}}$		$\frac{108 \text{ students}}{4 \text{ classes}}$	=	$\frac{27 \text{ students}}{1 \text{ class}}$

Rate		Unit Rate
$\frac{\$1.75}{0.25 \text{ pounds}}$	=	$\frac{\$7.00}{1 \text{ pound}}$

In your own words, what is the difference between a rate and a unit rate?

Practice Problems:

Example 04:

It takes Jose 3 minutes to text 237 words. At that rate, how many words can he text per minute?



$$\frac{\text{words}}{\text{minutes}} = \frac{\text{words}}{\mathbf{1} \text{ minute}}$$

My Answer: _____

Example 05:

Jacob is comparing the prices of two different brands of water bottles.

- The first brand costs \$30 for a case of 24 bottles.
- The second brand costs \$39.60 for a case of 36 bottles.

Which brand has the lower unit cost per bottle?

Brand A

\$ _____ = _____

bottles



Brand B

\$ _____ = _____

bottles

My Answer: _____

ANSWER KEY

Ex 1) 8 miles per hour

Ex 2) 27 students per class

Ex 3) \$7.00 per pound

Ex 4) 79 words per minute

Ex 5) Brand 2 (\$1.10 per bottle)