

Concept: Ratios and Proportions

Name: _____

COMPUTER COMPONENT

Instructions: In  follow the **Content Menu** path:

Fractions > Ratios and Proportions

 Work through all Sub Lessons of the following Lessons **in order**:

- *Ratios in the News*
- *Ratio, Tape Diagram*
- *Writing Ratios*
- *Rate and Unit Rate*
- *What is a Proportion*
- *Proportions with Pattern Blocks*
- *Proportions*
- *Ratio Table*
- *Ratios and your Body*



As you work through the computer exercises, you will be prompted to make notes in your notebook/math journal.

NOTES

1. Confirm your knowledge of ratios by circling the correct responses below.

(a) A ratio is a comparison of ...

A one number with another number.

B one fraction with another fraction.

(b) The order you write the ratio ...

A is not important.

B is important.

(c) Ratios should always be ...

A left in their original form.

B simplified.

(d) When dealing with a ratio, one must...

A never use the same units.

B always use the same units.

(e) A proportion ...

A works with equivalent fractions

B works with percentages.

(f) Which of the following is **not** a correct method of writing a ratio?

A 4 : 3


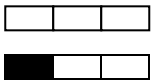


B $\frac{5}{3}$

C 8 , 9

D 4 to 5

OFF COMPUTER EXERCISES

1. Fill in the chart.

	Drawing	Ratio of White to Black	Ratio of Black to White	Ratio of Black to the total
(a)		$\frac{4}{3}$	$\frac{3}{4}$	$\frac{3}{7}$
(b)		$\frac{5}{1}$	$\frac{1}{5}$	$\frac{1}{6}$
(c)		$\frac{2}{4}$	$\frac{4}{2}$	$\frac{4}{6}$
(d)		$\frac{3}{6}$	$\frac{6}{3}$	$\frac{6}{9}$

2. At a summer camp, there are 56 boys and 72 girls. Find the ratio of:

(a) Boys to the total number of campers. $\frac{56}{128}$, 56 to 128, 56:128

(b) Girls to boys. $\frac{72}{56}$, 72 to 56, 72: 56

Can you show your ratio in 3 different ways?

*Remember: A **unit rate** is a type of rate in which the second term is 1.*

3. Calculate the unit rate for each item.

(a) 6 chocolate bars for \$3.00 - $\underline{\$3.00 \div 6 = \$0.50}$

(b) 3 batteries for \$1.80- $\underline{\$1.80 \div 3 = \$0.60}$

(c) 2 DVD's for \$15.00- $\underline{\$15.00 \div 2 = \$7.50}$

(d) 4 CD's for \$26.00- $\underline{\$26.00 \div 4 = \$6.50}$

4. The following people used different modes of transportation for their charity event.

Mike walked 12 km in 3 h.
Julie cycled 11 km in 1 h.
Ricardo cycled 9 km in 30 min.
Catherine walked 10 km in 2 h.

Use your knowledge of unit rates to establish who moved the fastest? *Order these speeds from least to greatest.*

Mike- $12 \div 3 = 4\text{km/h}$

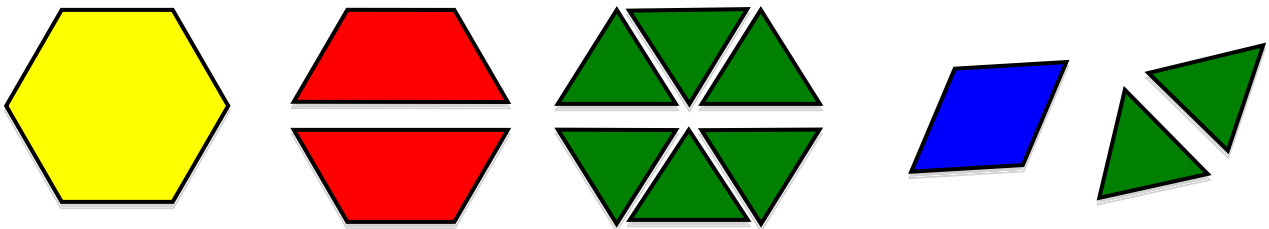
Julie- 11km/h

Ricardo- $9 \times 2 = 18\text{km/h}$

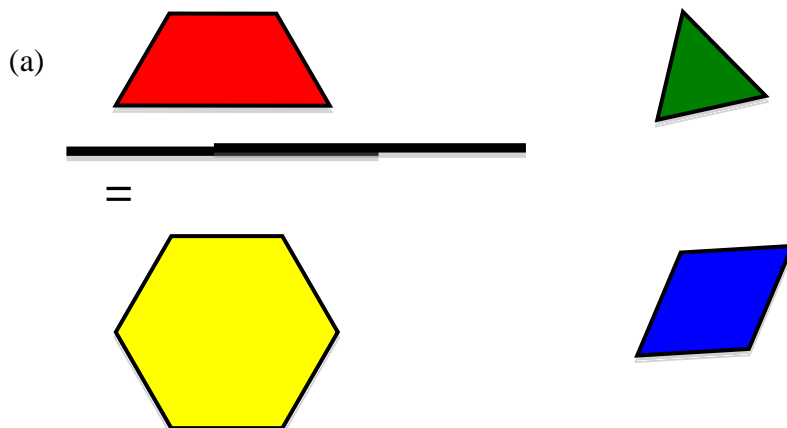
Catherine- $10 \div 2 = 5\text{km/h}$

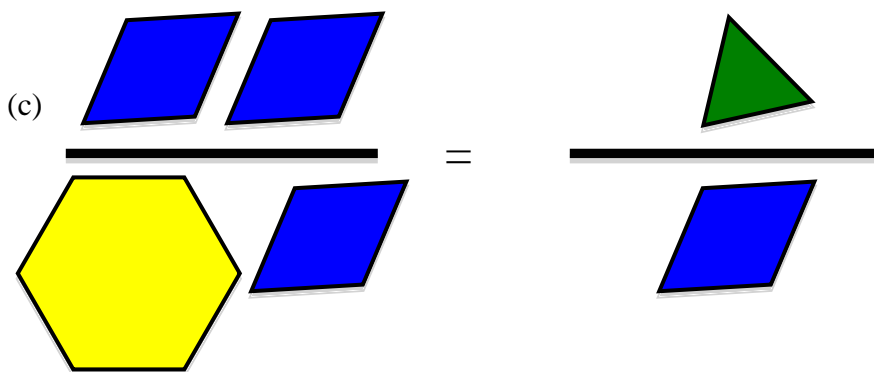
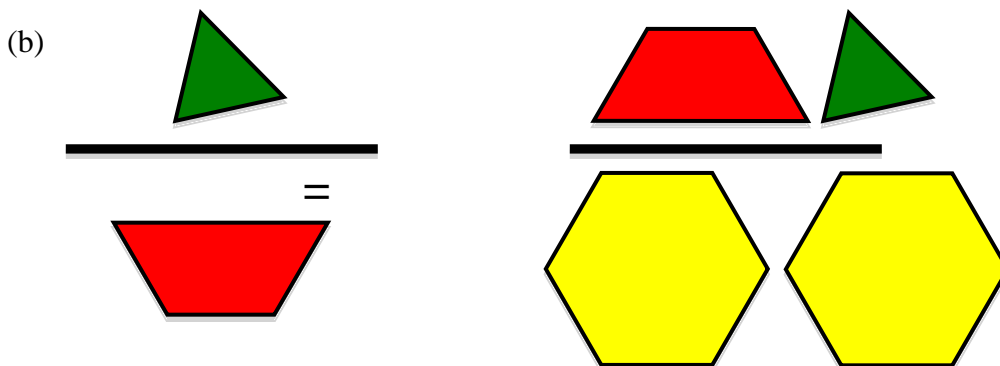
Mike=4km/h, Catherine= 5km/h, Julie= 11km/h, Ricardo 18km/h

5. The following pattern blocks can serve as a great learning tool when working with fractions.



Use your knowledge of pattern blocks to help you compare the following areas.





6. Each bag contains the same number of cookies. *Complete the ratio table that compares the number of bags to cookies.*

Bags	1	2	3	4	5	6
Cookies	12	24	36	48	60	72

Can you explain how you can find the number of cookies for any number of bags?

You can implement a simple formula to assist in making your calculations more efficient-

$$n = \text{number of bags} \quad n \times 12 (\text{cookies per bag})$$

7. Phil must combine 3 parts mix with 2 parts water to get the consistency he likes for his pancake batter. *How much pancake mix does he need for 8 parts water?*

Organize your thinking in a ratio table.

Pancake Mix	3 parts	<i>12parts</i>
Water	2 parts	8 parts

Phil needs ***12 parts of pancake mix for 8 parts of water.***

Utilize ratio tables to organize your thinking for the following questions.

8. The ratio of chocolate chips to raisins in one cookie is 5:4.
If the recipe required 96 raisins, how many chocolate chips were used?

$$\frac{\text{Chips}}{\text{Raisins}} = \frac{5}{4} = \frac{x}{96}$$

$$x = 120 \text{ chips}$$

120 chocolate chips were used.

9. *Complete the following ratio table.*

km traveled	10	30	60	140	210	90
hours	1	3	6	14	21	9