

## Grade 8 Unit Assessment - Ratios, Rates, and Proportional Reasoning

### Outcome N5 Solve problems that involve ratios, rates, and proportional reasoning

1) Write the ratio 8 to 15 in another way:

8 to 15 = \_\_\_\_\_ : \_\_\_\_\_

\_\_\_\_\_ / 1

2) In the word BALLOONS, fill in the ratio of vowels to consonants.

Reminders - a vowel would be a, e, i, o, u  
 - a consonant would be everything else

vowels : consonants

\_\_\_\_\_ : \_\_\_\_\_

\_\_\_\_\_ / 1

3) Joey earns \$67.50 for 6 hours of work, what is Joey's unit rate of pay?

Unit rate of pay = \$ earned ÷ # hours  
 = \_\_\_\_\_ ÷ \_\_\_\_\_

=

\_\_\_\_\_ / 1

4) In a math class the ratio of boys to girls is 15 to 8. If there are 16 girls in class, how many boys are there?

15 boys to 8 girls



\_\_\_\_\_ to 16 girls

a)  $8 \times \square = 16$  What number is the square?

b)  $15 \times \square =$

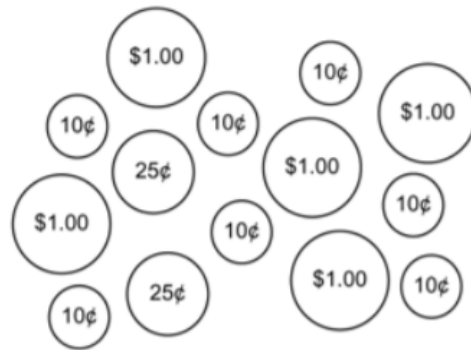
\_\_\_\_\_ / 1

5) Use the coins to help you answer the following questions.

a) What is the ratio of quarters to dimes?

# quarters : # dimes

\_\_\_\_\_ : \_\_\_\_\_



\_\_\_\_\_ / 1

b) What is the ratio of loonies: total coins?

# loonies : # total coins

\_\_\_\_\_ : \_\_\_\_\_

\_\_\_\_\_ / 1

c) What fraction of the coins are quarters?

$\frac{\text{\# quarters}}{\text{\# total coins}} = \frac{\text{\_\_\_\_\_\_}}{\text{\_\_\_\_\_\_}}$

# total coins

\_\_\_\_\_ / 1

d) What is the ratio of loonies to dimes to quarters?

# loonies : # dimes : # quarters

\_\_\_\_\_ : \_\_\_\_\_ : \_\_\_\_\_

\_\_\_\_\_ / 1

e) What could the ratio 7:5 represent?

7 : 5

What number could the 7 represent? : What number could the 5 represent?

# of \_\_\_\_\_ : # of \_\_\_\_\_

\_\_\_\_\_ / 1

6) Eve is shopping for soup. Her favourite brands are on sale. Brand A is priced \$8.96 for 8 cans. Brand B is priced \$11.89 for 12 cans. Determine the better buy.

a) Unit price for Brand A = \$ for Brand A  $\div$  # cans

$$= \underline{\hspace{2cm}} \div \underline{\hspace{2cm}}$$

=

1

b) Unit price for Brand B = \$ for Brand B  $\div$  # cans

$$= \underline{\hspace{2cm}} \div \underline{\hspace{2cm}}$$

=

1

c) Which is the better buy, Brand A or Brand B? Why?

1

7) Solve each proportion statement:

a)  $\frac{?}{10} = \frac{9}{15}$

b)  $\frac{?}{16} = \frac{3}{2}$

$$? = \frac{9 \times 10}{15}$$

? =  $\frac{\quad \times}{\quad}$  Fill in the missing numbers first (like in 7a).

2

? =

? =

8) Using words, explain the difference between a ratio and a rate.

1

**Connecting math to real life!!!**

Where can you see yourself using what you learned about ratios, rates, and/or proportions in your daily life? (Besides "I'll probably need it for grade 9 math next year" 😎 )

Score for Ratios, Rates, and Proportional Reasoning:  $\frac{\quad}{15} =$