

Grade 8 Unit Assessment - Ratios, Rates, and Proportional Reasoning**Outcome N5 Solve problems that involve ratios, rates, and proportional reasoning****Multiple Choice (5 marks)**

- Circle the choice that best answers the question.

1) Which ratio is different from the others?

- a) 8 to 15 b) 15:8 c) 8:15 d) $\frac{8}{15}$ $\frac{\quad}{1}$

2) In the word BALLOONS, the ratio of vowels to consonants is:

- a) $\frac{3}{5}$ b) 3 to 8 c) 5:3 d) $\frac{8}{5}$ $\frac{\quad}{1}$

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

- a) \$67.50 per week b) \$52.80 per day c) \$11.25 per hour d) \$10.25 per hour $\frac{\quad}{1}$

4) 417 pages in 3 days = _____ pages in 9 days?

- a) 3753 b) 2502 c) 1251 d) 139 $\frac{\quad}{1}$

5) Which ratio does NOT form a proportion with $\frac{5}{8}$?

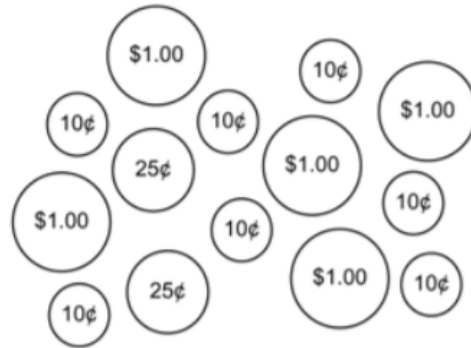
- a) $\frac{20}{32}$ b) $\frac{100}{160}$ c) $\frac{45}{56}$ d) $\frac{10}{16}$ $\frac{\quad}{1}$

Long Answer (19 marks)

- Show your work to receive full marks!

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

a) What is the ratio of quarters to dimes?



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

c) What fraction of the coins are quarters?

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

e) What could the ratio 7:5 represent?

7) 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?

8) Determine the unit rate for each of the following:

a) 168 words in 3 minutes

b) \$17 for 5 cards

5

1

2

- 9) 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. Show your work!

3

- 10) Solve each proportion statement:

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

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

2

- 11) For each of the following, set up a proportion statement to solve:

a) On a map, 1 cm represents 250 km. How many kilometres does 7 cm represent?

2

b) Travel Rent-a-Car charges \$135 to rent a car for 3 days. At this rate, what will it cost to rent a car for 7 days?

2

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

1

13) Explain how you can determine if $\frac{8}{24}$ and $\frac{3}{9}$ form a proportion. Show your work!

1

BONUS - Can you explain a second (different) way to answer #13???

+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: $\frac{\quad}{24} =$