Unit 1 – Unit Pricing and Currency Exchange

Instructions:
Using a pencil, complete the following questions as you work through the related lessons. Show ALL work as it is explained in the lessons. Do your best and ask your teacher if you do not understand any question.

Lesson 1 Rates, Ratios and Proportions

1. Complete the following sentences:
   a) Ratios compare two items that compare two items that _______________________.
   b) Proportions are ______________________
   c) Rates are different from ratios because the numbers in rates ______________________

2. Write a simple ratio for each of the following:
   a) At the Ford Motor assembly plant an assembly line worker installs 10 steering wheels every hour.
   b) A gas station pump, pumps gas at 5 litres per minute.

3. Solve for x:
   a) \( \frac{6}{x} = \frac{9}{12} \)
   b) \( \frac{x}{15} = \frac{7}{10} \)
   c) \( \frac{4}{9} = \frac{x}{10} \)
   d) \( \frac{8}{14} = \frac{3}{x} \)
4. Write these ratios in their simplest forms:
   a) 5 : 30
   
b) 14 : 18
   
c) 18 : 30
   
d) 7 : 280

5. A recipe calls for 2 eggs for every 5 cups of flour. A local chef will use 35 cups of flour, how many eggs must he have?

6. To make concrete it takes 8 parts crushed gravel, 7 parts water and 5 parts cement mix. A worker needs to make 220 kg of concrete. How much crushed gravel, water and cement mix is needed

7. The Little River ferry travels at a speed of 24 kilometers per hour traveling between Courtenay BC and Powell River BC. How long does the 21.5 kilometer trip take from Courtenay to Powell River.

Lesson 2 Unit Pricing
8. An 18 pack of SatinSoft toilet paper cost $6.75. How much does each roll cost?

9. Calculate each unit price.
   
   a) 12 eggs for $4.50
   
   b) $39.20 for 30 L of gas.

10. The cost of 6 hamburger buns is $3.75 and the cost of 12 frozen hamburgers is $13.99. Determine the price per serving. (1 bun + 1 hamburger). Answer to the nearest cent.

11. Organize the following items from highest to lowest unit price.
a) 500g for 84¢
b) 3.1 kg for $4.02
c) 2.9 for $3.90

12. Dan’s flooring supply store sells ceramic tiles in boxes of 9 tiles for $54.01. Joan’s flooring supply store sells the identical tiles for $6.36 per tile. Keith has a budget of $800.00 and needs 125 tiles. From which store should he buy the tiles and how much would he save? (Show all work for each store)

13. A junior high school student is deciding between two jobs:

   Job 1: Babysitting for $80 per month.
   Job 2: Delivering papers for 18¢ per paper.

   What is the fewest number of papers she would need to deliver per month to exceed the babysitting salary.

Lesson 3 Sale Prices
14. Express the following percentages as fraction in lowest term:
   a) 15%  
   b) 48%  
   c) 75%  
   d) 135%

15. Express the following fractions as percentages:
   a) \( \frac{14}{25} \)  
   b) \( \frac{3}{10} \)  
   c) \( \frac{2}{3} \)  
   d) \( \frac{11}{8} \)

16. Express the following decimal fractions as percentages
   a) .13  
   b) .6  
   c) 0.055  
   d) 1.2

17. Express the following percentages as decimal fractions
   a) 25%  
   b) 16.5%  
   c) 75%  
   d) 135%
18. Anne owns a retail store and needs to sell old stock to make room for new arrivals.
   a) How much will she charge for $90 pair of jeans with a discount of 35%?

   b) Anne bought a new line of jeans for $53.20 per pair. She will mark them up by 48%.
   What will she charge for the jeans?

19. Shimen bought a house for $275 000. After 1 year, it increased in value by 4.5%.
   What was the value of Shimen’s house after 1 year?

20. Michaela paid $690 wholesale for mirrors that cost $933 retail.
   Calculate the percent decrease in price.
21. One winter the cost of bananas cost $0.80 per lb. The next winter the cost was $1.05 per lb. What was the percentage increase?

22. Jessica needs 8 sets of linens for her resort business. She checks out sales at two different stores.
   Store 1: Buy 1 set and get 1 set free. Regular price $32.50 per set.
   Store 2: 40% off the regular price of $26.49.
   How much does 8 sets of linen cost at each store?

23. Yukon charges the GST of 5% on all goods purchased. If Jan buys a television for $599, what will be the final bill, including sales tax?

24. BC charges a PST of 7% and the GST of 5%. What would the total cost of a pair of running shoes listed at $79.99?

Lesson 4 Currency Exchange Rates
Use the table above for questions 25 and 26

25. Convert C$435 to the following currencies.
   a) U.S. dollars
   b) euros
   c) British pounds
   d) Japanese yen

26. Convert each of the following amounts to Canadian dollars.
   a) US$255
   b) J$95
   c) ¥25 000
   d) £4300

Use the table at the end of the questions for the following:
27. Aleah wants to travel to buy textiles. She has $2000 Canadian. What is this amount worth in the following currencies?

   a) Brazilian Real (BRL)

   b) Japanese yen

   c) Euro

28. Pam and her family traveled to Mexico. Before they left they exchanged $3600 Canadian for Mexican Pesos.

   a) What is the value of $3600 Canadian for Mexican Pesos.

   b) While in Mexico they spent 30 000 Pesos. They exchanged the remainder back to Canadian. What is the value in Canadian?
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<th>Country</th>
<th>Currency Name/Currency Code</th>
<th>Buying Rate</th>
<th>Selling Rate</th>
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Answers:

1. a) are measured in the same units  
   b) ratios that are equivalent  
   c) have different measurements

2. a) \( \frac{10\text{wheels}}{1\text{hour}} \)  
   b) \( \frac{5L}{1\text{min}} \)

3. a) 8  
   b) 10.5  
   c) 4.44  
   d) 5.25

4. a) 1:6  
   b) 7:9  
   c) 3:5  
   d) 1:40

5. 14 eggs

6. Gravel = 88 kg  
   Water = 77 kg  
   Cement mix = 55 kg

7. .896 hr or 54 minutes

8. $.375 or $.38 per roll

9. a) .375 or $.38/egg  
   b) 1.31/L

10. $1.79

11. a, c, b

12. Dan’s store – cheaper by $38.86

13. 444.44 papers

14. a) 3/20  
   b) 12/25  
   c) 3/4  
   d) 27/20

15. a) 56%  
   b) 30%  
   c) 66.67%  
   d) 137.5%

16. a) 13%  
   b) 60%  
   c) 5.5%  
   d) 120%

17. a) .25  
   b) .265  
   c) .75  
   d) 1.35

18. a) $58.50  
   b) $78.74
19. $287,375
20. 26%
21. 31%
22. Store 1 - $130; Store 2 - $127
23. $628.95
24. $89.59
25. a) $431.11
   b) €316.39
   c) £268.26
   d) ¥35849.66
26. a) $257.30
   b) $1.14
   c) $303.35
   d) $5912.07
27. a) 3040.44 Real
   b) 158,995.15 Yen
   c) 1185.04 Euro
28. a) 38,834.95 Pesos
   b) $671.45 Cdn