Math 10AW

Unit 1: Unit Pricing Review

Matching:

a) Markup __G__ a comparison between two numbers with the same units
b) Percent __F__ a statement of equality used in recipes or when mixing
c) Currency __E__ a comparison between two different units
d) Exchange Rate __H__ the cost of one unit
e) Rate __A__ the difference between what a business pays for an item and what it is sold for
f) Proportion __B__ means out of ‘100’
g) Ratio __C__ the system of money a country uses
h) Unit Price __D__ the price of one country’s currency in terms of another nation’s currency

1. The L.A. Lakers won three of their last 11 games. Express the number of games won to the number of games played as a:
   a) ratio \( \frac{3}{11} \)
   b) fraction \( \frac{3}{11} \)

2. The ratio of students passing to students failing Math 10AW is usually 5:1. If there were 20 students passing in the class, how many would fail if the ratio is correct?

   \[
   \frac{20}{5} \times \frac{1}{5} = \frac{20}{5} = 4 \text{ failing}
   \]

3. A pack of 12 rolls of duct tape at Home Depot costs $19.99. What is the unit cost of a roll of duct tape?

   \[
   \frac{19.99}{12} = \$1.67/\text{roll}
   \]

4. A 10kg sack of potatoes costs $4.99. How much are the potatoes per kg?

   \[
   \frac{4.99}{10} = \$0.49/\text{kg}
   \]
5. Store A sells a 500g bag of chips for $5.00. Store B sells a 2kg bag for $17.00 and Store C sells them in bulk bin for $0.50 per kg.

a) Calculate the unit price for each of the three stores sell chocolate chips. (Remember to convert the grams to kilograms)

   Store A: 
   \[ \frac{500 \text{g}}{1 \text{kg}} = 0.5 \text{kg} \]
   \[ \frac{5.00}{0.5} = \$10 \text{ per kg} \]

   Store B: 
   \[ \frac{17}{2} \text{kg} = 8.5 \text{kg} \]
   \[ \frac{17}{8.5} = \$2 \text{ per kg} \]

   Store C: 
   \[ \frac{8.50}{1} \text{kg} = 8.5 \text{kg} \]

b) Which one is the better deal?

6. A DVD player sells for $199.00 at A&C Sound in Ottawa.

a) How much tax is charged on the transaction? (GST = 5%, PST = 7%)

   \[ 199.00 \times 0.12 = \$23.88 \]
   \[ 12\% \]

b) What is the total cost of the DVD player?

   \[ \$199.00 + 23.88 = \$222.88 \]


a) What is the total cost before tax?

   \[ 14.99 + 17.99 + 18.99 = \$51.97 \]

b) How much tax will he pay on the CDs? It is bought in BC (HST is 12%)

   \[ \$51.97 \times 0.12 = \$6.24 \]

   \[ 6.24 \]

   \[ \$51.97 + 6.24 = \$58.21 \]
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8. A big screen TV is advertised at A&C Sound for 20% off the regular price of $1899.99.
   a) How much is the discount?
   \[ 1899.99 \times 0.20 = \$380.00 \]
   b) What is the sale price before tax?
   \[ 1899.99 - 380 = \$1519.99 \]
   c) Calculate the sales price in 1 step.
   \[ 1899.99 \times 0.8 = \$1519.99 \]
   d) Calculate the total cost of the TV? It is bought in Saskatchewan (PST 5% and GST 5%)
   \[ 1519.99 \times 1.10 = \$1671.99 \]

9. Maureen just got back from a family vacation in Mexico. She has 400.00 pesos left over. If the bank buys pesos at $0.083443 CAD how much will she get back in Canadian dollars?
   \[ 400.00 \text{ pesos} \times \frac{0.083443 \text{ CAD}}{1 \text{ peso}} = \$33.38 \]

10. Janine just came home from a vacation in Cancún, Mexico and has 300.00 pesos left over. If the bank buys pesos at $0.083443 CAD, how much will Janine get back in Canadian dollars?
    \[ 300 \times 0.083443 = \$25.03 \]

11. Adelina will be going to Paris this year. Her budget is $1200.00 CAD. If the bank sell rate is one euro for $1.644814 CAD, how many euros will she have to spend in Paris?
    \[ \frac{1200 \text{ CAD}}{1.644814 \text{ CAD/euro}} = \text{729.57 euros} \]