

Grade 10 – Unit Pricing and Proportional Reasoning Review

Key

Instructions: Show your calculations. Use proportional reasoning when necessary or when instructed to do so. Remember that on a test, answers are awarded 1 mark. If a question is worth more than 1 mark, calculations must be shown. Use 2 decimals for money and follow the rules of rounding!

1. A set of tires for your 4-wheeler costs \$599.00. What is the cost for 1 tire? (2 marks)

$$\begin{array}{l} \$ \\ \text{tires} \end{array} \quad \frac{599.00}{4} = \frac{x}{1} \quad \$149.75 \text{ per tire}$$

2. A 16 pack of Charmin Ultra Strong toilet paper is \$9.88. How much does each roll cost? (2 marks)

$$\begin{array}{l} \$ \\ \text{rolls} \end{array} \quad \frac{9.88}{16} = \frac{x}{1} \quad \$0.62 \text{ per roll}$$

3. A 6-pair package of socks sells for \$11.47. How much does one pair of socks cost? (2 marks)

$$\$11.47 \div 6 = \$1.91 \text{ per pair}$$

this way is faster

4. Calculate the unit price of each product. Choose a unit that makes sense and then write a sentence describing the price per unit. (3 marks)

a) \$2.99 for 6 wieners. *Wieners are 50 cents each.*

b) \$19.99 for 12 sharpie markers

sharpies are \$1.67 each.

c) \$5.98 for a 4L chocolate milk

choc milk is \$1.50 per Litre

d) \$3.97 for 800 g of margarine.

margarine is \$0.50 per 100 g.

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5. Find the unit price and choose the better buy for each comparison.

- a) Three cans of spaghetti sauce for \$1.49 or 7 cans of spaghetti sauce for \$3.35.
(3 marks)

$$\begin{array}{l}
 \text{3 cans} \qquad \qquad \text{vs} \qquad \qquad \text{7 cans.} \\
 \$ \frac{1.49}{3} = \frac{x}{1} \qquad \qquad \$ \frac{3.35}{7} = \frac{x}{1} \\
 \text{Cans} \\
 \underline{\$0.50 \text{ per can}} \qquad \qquad \underline{\underline{\$0.48 \text{ per can.}}}
 \end{array}$$

- b) One kg of sugar is \$2.99 and a 7 kg bag is \$14.99. (3 marks)

$$\begin{array}{l}
 \$ \frac{2.99}{1} \qquad \qquad \text{vs} \qquad \qquad \$ \frac{14.99}{7} = \frac{x}{1} \\
 \text{kg} \\
 \underline{\$2.14 \text{ per kg}}
 \end{array}$$

- c) Eight hot dog buns for \$1.75 or 18 buns for \$3.49. (3 marks)

$$\begin{array}{l}
 \text{8 buns} \qquad \qquad \qquad \text{18 buns} \\
 \$ \frac{1.75}{8} = \frac{x}{1} \qquad \qquad \$ \frac{3.49}{18} = \frac{x}{1} \\
 \text{buns} \\
 \underline{\$0.22 \text{ per bun}} \qquad \qquad \underline{\underline{\$0.19 \text{ per bun}}}
 \end{array}$$

6. Other than price, what factors are important when deciding whether to buy a certain size of ketchup? (2 marks)

- storage.
- spoilage.
- waste
- preference - brand.

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7. Pickerel costs \$12.49 per kg. Jeff gets in a large shipment and needs to price it per 100 g.

a) Add 140% to the cost of the pickerel. (2 marks)

$$\begin{aligned} & \$12.49 \times 1.4 = \$17.49 \text{ markup.} \\ \text{price is } & \$12.49 + 17.49 = \underline{\underline{\$29.98 \text{ per kg}}} \end{aligned}$$

b) Use the new price per kg to calculate the price per 100 grams. (2 marks)

$$\begin{aligned} & \begin{array}{l} 1 \text{ kg} \\ = 1000 \text{ g} \end{array} \quad \begin{array}{l} \$ \\ \text{grams} \end{array} \cdot \frac{29.98}{1000} = \frac{x}{100} \quad \begin{array}{l} \$2.998 \\ \text{or} \\ \underline{\underline{\$3.00 / 100g}} \end{array} \end{aligned}$$

8. How much will Cathy save on a garden tiller that is listed at \$799.97 if it is discounted by 35%? (2 marks)

$$\$799.97 \times 0.35 = \underline{\underline{\$279.99 \text{ saved.}}}$$

9. Bob's Sandwich Grill offers a 10% discount to students. A student orders a sandwich and soup costing \$11.95.

a) What will the student save if they receive the 10% discount? (2 marks)

$$\$11.95 \times 0.10 = \underline{\underline{\$1.20 \text{ saved.}}}$$

b) What will the student pay after receiving the discount? (2 marks)

$$\$11.95 - 1.20 = \underline{\underline{\$10.75}}$$

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10. Mary wants to purchase a new phone in the USA.

AT&T ZTE Z223 GoPhone

☆☆☆☆ 26 reviews Q&A By: AT&T Walmart #: 3535B1750



\$1988 FREE shipping on orders \$50+

Sold & Shipped by **Walmart**

\$5.97 shipping Shipping options

Pickup not available Pickup options

Protect your purchase with a Care Plan

+ Add 2-Year Protection \$5.00

Quantity: **1** **Add to Cart**

+ Add to List **+** Add to Registry

Calculate the price of the phone in Canadian dollars. (2 marks)

| Rates | |
|----------------------------|------------------------------|
| US Exchange Members Buy | Euro Exchange Members Buy |
| 1.3769 | 1.5276 |
| Members Sell | Members Sell |
| 1.3269 | 1.3845 |
| More Rates | |

Handwritten:

$$\frac{\$ \text{CAN}}{\$ \text{US}} = \frac{1.3769}{1.00} = \frac{x}{19.88}$$

Handwritten:

\$ 27.37^{CAD} for the phone.

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11. Ronald has \$400 Canadian saved for a trip to Minneapolis. He exchanges his money at Access Credit Union for US dollars.

| Rates | |
|----------------------------|------------------------------|
| US Exchange Members Buy | Euro Exchange Members Buy |
| 1.3769 | 1.5276 |
| Members Sell | Members Sell |
| 1.3269 | 1.3845 |
| More Rates | |

$$\begin{array}{r}
 \$ \text{ CAD} \quad \frac{1.3769}{1.00} = \frac{400}{x} \\
 \\
 \$ \text{ US} \quad \underline{\underline{\$ 290.51 \text{ US}}}
 \end{array}$$

Calculate how much he now has in US dollars. (2 marks)

less

12. Esther wants to travel to Europe. She notices an all-expense paid trip to Europe is only 900 Euros. How much would this be in Canadian dollars? (2 marks)

| Rates | |
|----------------------------|------------------------------|
| US Exchange Members Buy | Euro Exchange Members Buy |
| 1.3769 | 1.5276 |
| Members Sell | Members Sell |
| 1.3269 | 1.3845 |
| More Rates | |

$$\begin{array}{r}
 \$ \text{ CAD} \quad \frac{1.5276}{1} = \frac{x}{900} \\
 \\
 \text{EURO} \quad \underline{\underline{\$ 1374.84}} \\
 \text{CAD.}
 \end{array}$$