SOL HW 4.2

January 19, 2017   10:25 AM

Name: _Ashley D_   **Section 4.2 Rates and Unit Rates**   Date:_____

1.   Find the unit rate for each of the following. Show your work with the space given:

a) 5L of milk for $8.75	b) 3 Candy Bars for $2.75	c) 120meters in 13 seconds
$\dfrac{}{5}$ $8.75 \div 5 = 1.75$	$2.75 \div 3 = \dfrac{}{3} \overline{0.916}$	$\dfrac{D}{T} = \dfrac{120}{13} =$ $9.2307...$
f) $2048 in 4 days	e) One dozen eggs for $3.40	f) 6 pairs of socks for $18.50
$\dfrac{}{4}$ $2048 \div 4 = 512$	$3.40 \div 12 = \dfrac{}{12} 0.28\overline{3}$	$18.50 \div 6 = \dfrac{}{6} 3.08\overline{3}$
g) $3.75 for 6 bagels	h) 84 students in 7 teams	i) 154 slices of pizza for 14 people
$\dfrac{}{6}$ $3.75 \div 6 = 0.625$	$84 \div 7 = 12$	$\dfrac{}{14} = 154 \div 14 = 11$
j) $3.90 for 400g of cereal	k) $4.55 for 350mL of shampoo	L) $9.25 for 18 cans of Juice
$\dfrac{}{400}$ $3.90 \div 400 = 0.00975$	$\dfrac{}{350}$ $4.55 \div 350 = 0.013$	$\dfrac{}{18}$ $9.25 \div 18 = 0.513\overline{8}$

2.   Jack drove at 80km/h. How far will he drive in 6 hours?

$$\begin{array}{r} 80 \\ \times\ 6 \\ \hline 480 \end{array}$$

He will drive 480km in 6 hours

3.   If six bus tickets costs $14.70, how much would 11 tickets cost?

$14.70 \div 6 = 2.45$ $2.45 \times 11 = 26.95$

11 tickets cost $26.95

4.   If 5 movie tickets cost $25.75 at the theatre, how much will 12 tickets cost?

$25.75 \div 5 = 5.15$ $5.15 \times 12 = 61.80$

12 tickets cost $61.80

5.   If $1 US costs $1.09 Canadian, then how much would $1 Canadian costs in US dollars.

$1 USD = 1.09 CAD$

$x = 1.00\ CAD$

$1 \times 1 = 1.09x$

$\dfrac{1}{109} = \dfrac{1.09x}{1.09} = 0.9174 = x$

✳

6. Peanut butter is sold at Costco, Superstore, and Safeway. Costco is selling at $7.85 for 2L, Superstore at $3.85 for 500ml, and Safeway at $4.25 for 1L. What is the unit rate for peanut butter from each store? Which store will you buy from?

(unit rate per L)

$$\frac{7.85 \text{ for } 2L}{2} \qquad \frac{3.85 \text{ for } 500}{2}$$

4.25 for 1L

X 2

Costco is cheapest

= 3.925   = 7.70   = 4.25

7. Tim earns $2193.00 for 30 hours work and his wife earns $3244 for 45 hours of work. Who has a higher rate of pay and by how much?

2193 ÷ 30 = $73.10   3244 ÷ 45 = $72.08

$$\begin{array}{r} 73.10 \\ -\ 72.08 \\ \hline 1.02 \end{array}$$

Tim's pay rate is $1.02 higher than his wife

8. Steve bought 1000 pencils for $145. He sells them for $0.38 each. What is the difference between the unit cost and the unit price of each pencil?

$$\frac{145}{1000} = 0.145 \approx 0.15$$

$$\begin{array}{r} 0.38 \\ -\ 0.15 \\ \hline 0.23 \end{array}$$

The difference is 23¢

9. Rogers offer monthly phone plans at $45.00 a month and $0.05 per minute. Mobilicity offer monthly phone plans at $15.00 a month and $0.20 per minute. If James uses 800 minutes a month, which phone plan should he get? How much will he save?

Rogers

$$\begin{array}{r} 800 \\ \times\ \ 5 \\ \hline 40 \end{array} \qquad \begin{array}{r} 40 \\ +\ 45 \\ \hline 85 \end{array}$$

$$\begin{array}{r} 800 \\ \times\ \ 20 \\ \hline 160 \end{array} \qquad \begin{array}{r} 160 \\ +\ 15 \\ \hline 175 \end{array}$$

$$\begin{array}{r} 175 \\ -\ 85 \\ \hline 90 \end{array}$$

He should get Rogers, he'll save 90$

Mobilicity

10. A case of 12 bars of chocolate costs $25.75. 3 chocolate bars is sold at $7.20. How much is saved per chocolate bar if I purchase a case?

25.75 ÷ 12 = 2.1441$\overline{6}$ 7.20 ÷ 3 = 2.40

$$\begin{array}{r} 2.40 \\ -\ 2.15 \\ \hline 0.25 \end{array}$$

0.25¢ are saved

11. Kins Market is selling tomatoes at 3 for $1.25. However, if you buy 4 you get 1 free. If Jason bought 9 tomatoes, how much will it cost? What is the unit rate?

1.25 ÷ 3 = 0.41$\overline{6}$ ≈ 0.42

Unit rate = 42¢

$$\begin{array}{r} 0.42 \\ \times\ \ 4 \\ \hline 1.68 \end{array} \qquad \begin{array}{r} 1.68 \\ \times\ \ 2 \\ \hline 3.36 \end{array}$$

It would cost $3.36 for all the tomatoes