

WARM UP GRADE 8



Quiz Thursday



1) The cost of new LG 55" Smart Tv is \$898. It was marked down by 18%.

a) What is the new sales price?

--

$$\begin{aligned} \rightarrow \text{Amount Save} &= 18\% \text{ of Cost} \\ &= 0.18 \times \$898 \\ &= 161.64 \end{aligned}$$

$$\begin{aligned} \text{Sale Price} &\Rightarrow \text{Cost} - \text{Saved} \\ &= 898 - \$161.64 \\ &= 736.36 \end{aligned}$$

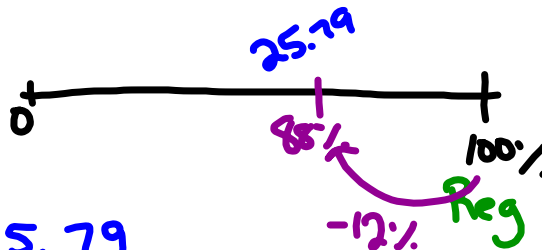
b) What is the price with tax?

$$\begin{aligned} \text{Tax} &= 736.36 \times 0.15 \\ &= \$110.45 \end{aligned}$$

$$\begin{aligned} \text{Cost w tax} &= 736.36 + 110.45 \\ &= \$846.81 \end{aligned}$$

2) A box of diapers are on sale for \$25.79 which is 12% off Regular Price. What is Regular Price?

$$\begin{aligned} \text{Sale Price} &= \$25.79 \\ \text{Reg} &= ? \end{aligned}$$



$$88\% \text{ of Reg} = 25.79$$

$$\begin{aligned} \downarrow \\ 0.88 \times n &= 25.79 \end{aligned}$$

$$\begin{aligned} 0.88 n &= 25.79 \\ \div 0.88 & \quad \quad \quad \div 0.88 \end{aligned}$$

$$n = \$29.30$$

The regular price of diapers is \$29.30

$$\begin{aligned} \text{8. (i) a) Discount} & \quad 20\% \text{ of } 89.99 \\ & \quad 0.2 \times 89.99 \\ & \quad 18 \end{aligned}$$

$$\begin{aligned} \text{b) Sale Price} & = \text{Reg} - \text{Disc} \\ & = 89.99 - 18 \\ & = 71.99 \end{aligned}$$

$$\begin{aligned} \text{c) HST} & \quad 15\% \text{ of } 71.99 \\ & \quad 0.15 \times 71.99 \\ & \quad 10.80 \end{aligned}$$

$$\begin{aligned} \text{Total Cost} & = \text{Price} + \text{tax} \\ & \quad 71.99 + 10.80 \\ & \quad 82.79 \end{aligned}$$

$$\begin{aligned} \text{(ii) Disc} & \quad 45\% \text{ of } 120 \\ & \quad 0.45 \times 120 \\ & \quad 54 \end{aligned}$$

$$\begin{aligned} \text{Sale Price} & = \text{Price} - \text{Disc} \\ & = 120 - 54 \\ & = 66 \end{aligned}$$

$$\begin{aligned} \text{HST} & \quad 15\% \text{ of } 66 \\ & \quad 0.15 \times 66 \\ & \quad 9.90 \end{aligned}$$

$$\begin{aligned} \text{Total Cost} & = \text{Price} + \text{tax} \\ & = 66 + 9.90 \\ & = 75.90 \end{aligned}$$

$$\begin{aligned} \text{II. Amt of Dec} &= 18.98 - 11.39 \\ &= 7.59 \end{aligned}$$

$$\begin{aligned} \% \text{ Dec} &= \frac{\text{Amt of Dec}}{\text{Orig Amt}} \times 100\% \\ &= \frac{7.59}{18.98} \times 100\% \\ &= 0.40 \times 100\% \\ &= 40\% \end{aligned}$$

b) Sale Price 11.39

$$\begin{aligned} \text{HST} &= 15\% \text{ of } 11.39 \\ &= 0.15 \times 11.39 \\ &= 1.71 \end{aligned}$$

$$\begin{aligned} \text{Total-Cost} &= 11.39 + 1.71 \\ &= \$ 13.10 \end{aligned}$$

$$Q. \frac{1}{2} \text{ of } 30 = \$15$$

$$\begin{array}{l} \text{1st Disc} \quad 25\% \text{ of } 30 \\ \quad \quad \quad 0.25 \times 30 \\ \quad \quad \quad 7.50 \end{array}$$

$$\begin{array}{l} \text{Sale Price} \quad 30 - 7.50 \\ \quad \quad \quad 22.50 \end{array}$$

$$\begin{array}{l} \text{2nd Disc} \quad 25\% \text{ of } 22.50 \\ \quad \quad \quad 0.25 \times 22.50 \\ \quad \quad \quad 5.63 \end{array}$$

$$\begin{array}{l} \text{New Sale} \\ \text{Price} \quad 22.50 - 5.63 \\ \quad \quad \quad 16.87 \end{array}$$

So No the T-shirt is not 50% off,
if it was 50% off, it would be \$15,
not \$16.87

$$14. \quad 15\% \text{ Disc} \quad \text{Disc} = 0.15 \times 129.99 \\ = 19.50$$

$$\text{Sale Price} = 129.99 - 19.50 \\ = 110.49$$

$$\begin{array}{l} \text{HST} \quad 15\% \text{ of } 113.09 \\ 0.15 \times 113.09 \\ 16.96 \\ \text{Sale Price with taxes} \quad 113.09 + 16.96 \\ 130.05 \end{array}$$

$$\text{Price without taxes} \quad 129.99$$

It is better to get a 15% discount than it is to have no taxes, because you pay the taxes on a lower amount.

% of reg price = amt of disc

$$15. \quad 33\% \text{ of reg price is } 28.38 \\ 0.33n = 28.38 \\ \frac{0.33n}{0.33} = \frac{28.38}{0.33} \\ n = 86.$$

The regular price was 86.

$$b) \text{ Sale Price} \quad 86 - 28.38 \\ 57.62$$

$$\text{HST} \quad 15\% \text{ of } 57.62 \\ 8.64$$

$$\text{Total Cost} \quad 57.62 + 8.64 \\ 66.26$$

Class/Homework

Quiz Thursday

- change %, fraction, decimal chart

-% of a number mentally

Always use 15% for tax

Homework

b) $9.75\% \xrightarrow{\div 100} 0.0975$

Ex) 60% of 90

$\frac{975}{10000} = \frac{39}{400}$ 10% of 90 = 9 so

60% of 90 = 54

pg. 260-262 #8ii(watch), #17

pg. 263 #1, 2, 3,

-find % of total when total is not given

$\% \rightarrow \text{decimal } (\div \text{ by } 100)$ Ex) 40% of a number is 34.8

$60\% \xrightarrow{\div 100} 0.6 \xrightarrow{\text{place values}} \frac{6}{10} = \frac{3}{5}$

-sales tax

-Discount

13) During a 20% off sale, the sales price of an MP3 alarm clock was \$35.96. What was the reg price of the radio?

80% of Reg is 35.96

$0.80 \times R = 35.96$

$\frac{0.80 R}{0.80} = \frac{35.96}{0.80}$

$R = \$44.95$

20% Reg Price of MP3 player is \$44.95

8 ii) \$120
45% off

$$\begin{aligned} \text{a) Save} &= \% \times \text{Cost} \\ &= 45\% \times \$120 \\ &= \downarrow 0.45 \times 120 \\ &= \$54 \end{aligned}$$

$$\begin{aligned} \text{New Sales Price} &= \text{Cost} - \text{Saved} \\ &= \$120 - \$54 \\ &= \$66 \end{aligned}$$

$$\begin{aligned} \text{b) Tax} &= 15\% \text{ of Sale Price} \\ &= 0.15 \times \$66 \\ &= \$9.90 \end{aligned}$$

$$\begin{aligned} \text{Cost w tax} &= 66 + 9.90 \\ &= \$75.90 \end{aligned}$$

\$ 45.99
15% off

$$\begin{aligned}\text{Save} &= \% \text{ off} \times \text{Cost} \\ &= 0.15 \times 45.99 \\ &= \$ 6.90\end{aligned}$$

$$\begin{aligned}\text{Sales Price} &= \text{Cost} - \text{Saved} \\ &= 45.99 - 6.90 \\ &= 39.09\end{aligned}$$

Better deal

49.99
20% off

$$\begin{aligned}\text{Save} &= \% \times \text{Cost} \\ &= 0.20 \times 49.99 \\ &= \$ 10.00\end{aligned}$$

$$\begin{aligned}\text{Sale Price} &= \text{Cost} - \text{Save} \\ &= 49.99 - 10 \\ &= \$ 39.99\end{aligned}$$

$$15) \quad 67\% \text{ of Reg Price} = 28.38$$

$$\begin{aligned} 11a) \quad \% \text{ dec} &= \frac{\text{Diff}}{\text{orig}} \times 100 \quad \% \\ &= \frac{\text{Big} - \text{Small}}{\text{original}} \times 100 \quad \% \\ &= \frac{18.98 - 11.39}{18.98} \times 100 \quad \% \\ &= \frac{7.58}{18.98} \times 100 \quad \% \\ &= \end{aligned}$$