

WARM UP GRADE 8

Mar. 12



Quiz Friday March 13



- 1) A three wheeler is on sale for 20% off the regular price of \$1500. What is the sale price?
could I take it a step further...what is the price with tax?

$$\begin{aligned} \text{Discount} &= 20\% \text{ of Cost} \\ &= 0.20 \times \$1500 \\ &= \$300 \end{aligned}$$

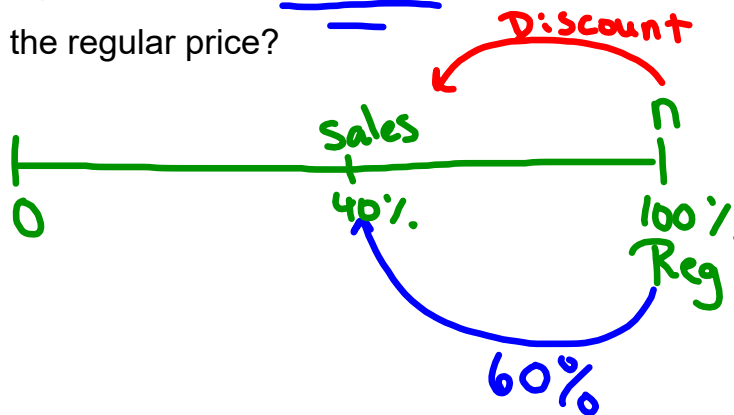
$$\begin{aligned} \text{Sales Price} &= \text{Reg} - \text{Discount} \\ &= 1500 - 300 \\ &= \$1200 \end{aligned}$$

$$\begin{aligned} \text{Tax} &= 0.15 \times \text{Cost} \\ &= 0.15 \times 1200 \\ &= \$180 \end{aligned}$$

$$\begin{aligned} \text{Cost} + \text{tax} \\ &= \text{Cost} + \text{tax} \\ &= 1200 + 180 \\ &= \$1380 \end{aligned}$$



- 2) A backpack is on sale for 60% off. If the amount discounted is \$16.14, what is the regular price?



$$60\% \quad n = 16.14$$

$$\begin{array}{r} \downarrow \\ 0.60n = 16.14 \\ \hline 0.60 \quad \quad 0.60 \end{array}$$

$$n = \$26.90$$

The backpack is \$26.90

$$40\% \text{ of } 360 = ? \quad \text{do mentally}$$

$$\begin{array}{r} 10\% \text{ of } 360 = 36 \\ \times 4 \qquad \qquad \times 4 \end{array}$$

$$40\% \text{ of } 360 = 144$$

$$\begin{array}{r} \text{Ex 2) } 75\% \text{ of } 24 = 18 \\ \swarrow \times 3 \qquad \searrow \times 3 \\ 25\% \text{ of } 24 = 6 \end{array}$$

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

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

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

$$\text{Total Cost} = \text{Price} + \text{tax} \\ 71.99 + 10.80 \\ 82.79$$

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

$$\text{Sale Price} = \text{Price} - \text{Disc} \\ = 120 - 54 \\ = 66$$

$$\text{HST} \quad 15\% \text{ of } 66 \\ 0.15 \times 66 \\ 9.90$$

$$\text{Total Cost} = \text{Price} + \text{tax} \\ = 66 + 9.90 \\ = 75.90$$

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10.

Choose A 30% off

$$\begin{aligned} \text{Disc } 30\% \text{ of } 25.00 \\ 0.3 \times 25 \\ 7.5 \end{aligned}$$

$$\begin{aligned} \text{Sale Price} &= 25 - 7.50 \\ &= 17.50 \end{aligned}$$

Choose B \$40 for 2 DVD
(or \$20 each)

Choose A is a better deal, it costs less.

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

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

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

$$13. \text{ Sale } 20\% \text{ off, Sale Price} = \$35.96$$

$$\begin{array}{l} \text{Disc } 20\% \text{ of reg} \\ \quad \quad \quad 0.2n \end{array} \quad n = \text{reg price}$$

$$\begin{aligned} \text{Sale Price} &= \text{Reg} - \text{Disc} \\ &= n - 0.2n \\ &= 0.8n \end{aligned}$$

$$\begin{aligned} 35.96 &= 0.8n \\ \frac{35.96}{0.8} &= \frac{0.8n}{0.8} \\ 44.95 &= n \end{aligned}$$

$$\begin{aligned} \text{Sale Price} &= \text{Reg} - \text{Disc} \\ &= 100\% - 20\% \\ &= 80\% \\ &\quad \text{of reg price} \end{aligned}$$

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

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

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

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

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.

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

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

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

1b. Disc 30% of 75 Customer 1
 0.3×75
 22.50

Sale Price $75 - 22.50$
 52.50

HST 15% of 52.50
 0.15×52.50
 7.88

Total Cost $52.50 + 7.88$
 60.38

Customer 2 - add tax then find disc

HST 15% of 75
 0.15×75
 11.25

Price with tax $75 + 11.25$
 86.25

Disc 30% of 84.75
 0.3×84.75
 25.43

Sale Price $84.75 - 25.43$
 59.32

The price is the $60.38 - 59.32 = 1.06$ diff
 but the second way is wrong

17. Store A

$$\begin{aligned} \text{Disc } 15\% \text{ of } 45.99 \\ 0.15 \times 45.99 \\ 6.89 \end{aligned}$$

$$\begin{aligned} SP &= \text{Reg} - \text{Disc} \\ &= 45.99 - 6.89 \\ &= 39.10 \end{aligned}$$

Store B

$$\begin{aligned} \text{Disc } 20\% \text{ of } 49.99 \\ 0.2 \times 49.99 \\ 10. \end{aligned}$$

$$\begin{aligned} SP &= \text{Reg} - \text{Disc} \\ &= 49.99 - 10 \\ &= 39.99 \end{aligned}$$

Store A has the better deal, you would save 89¢

Class/Homework

Quiz tomorrow

Homework pg. 263 # 1,3-12

35% Disc, Amt of Disc \$42
what is reg price

35% of Reg Pr is Amt of Disc

$$35\% \text{ of } n = 42$$

$$0.35n = 42$$

$$\frac{0.35n}{0.35} = \frac{42}{0.35}$$

$$n = 120$$