



WARM UP GRADE 8

Mar. 11, 2020



Quiz Friday

1) The cost of new LG 55" Smart Tv is \$898. It was marked down by 18% in February and now marked down another 10% in March.

a) What is the new sales price?  $\text{Discount} = 18\% \text{ of Reg}$   
 $= 0.18 \times 898$   
 $= \$161.64$

b) What is the price with tax in March?

$$\begin{aligned} \text{Feb Sales Price} &= \text{Reg} - \text{Discount} \\ &= \$898 - \$161.64 \\ &= \$736.36 \end{aligned}$$

$$\begin{aligned} \text{Mar Discount} &= 10\% \text{ of Feb} \\ &= 0.10 \times \$736.36 \\ &= \$73.64 \end{aligned}$$

$$\begin{aligned} \text{Sale Price March} &= \$736.36 - \$73.64 \\ &= \$663.12 \end{aligned}$$

b)  $\text{Tax} = 15\% \text{ of Cost}$   
 $= 0.15 \times \$663.12$   
 $= \$99.46$

$$\begin{aligned} \text{Cost w tax} &= \text{tax} + \text{Sales Price} \\ &= 99.46 + 663.12 \\ &= 762.58 \end{aligned}$$

On Quiz  
 Same  
 question

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

Reg Price is always 100%



$$\begin{aligned} 88\% \text{ of Reg} &= \text{Sale} \\ \downarrow \\ 0.88 n &= \$25.79 \end{aligned}$$

$$\frac{0.88 n}{0.88} = \frac{\$25.79}{0.88}$$

$$n = \$29.30$$

$$\text{Discount} = \% \text{ as dec} \times \text{Reg}$$

↓  
Save

$$\text{Sales Price} = \text{Reg} - \text{Discount}$$

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

$$\begin{aligned} \text{8(b) Sale Price} & = \text{Reg} - \text{Disc} \\ & = 89.99 - 18 \\ & = 71.99 \end{aligned}$$

$$\begin{aligned} \text{8(c) HST} & \quad 15\% \text{ of } 71.99 \\ & \quad 0.15 \times 71.99 \\ & \quad 10.80 \end{aligned}$$

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

$$\begin{aligned} \text{9(i) Disc} & \quad 45\% \text{ of } 120 \\ & \quad 0.45 \times 120 \\ & \quad 54 \end{aligned}$$

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

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

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

$$\text{11. Amt of Dec} = 18.98 - 11.39 \\ = 7.59$$

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

$$\text{5) Sale Price } 11.39$$

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

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

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

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

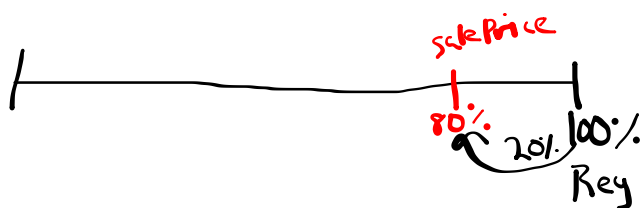
$$\begin{array}{l} \text{Sale Price} \quad 30 - 7.50 \\ \quad \quad \quad 22.50 \end{array}$$

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

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

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

😊 131



80% of Reg = Sales Price

$$0.80 \times n = \$35.96$$

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

$$0.80 \quad 0.80$$

$$n = \$44.95$$

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

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

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

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

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

Always use 15%

Extra Practice 4

## Quiz Friday

- Convert % to fraction to decimal
- % of a number word problems

ex) 30% of 500 left so how many left?

ex) 80% of a number is 48, what is the number.

-% decrease =  $\frac{\text{diff}}{\text{original}} \times 100$

- Calculate 20% of 360 mentally (show work)
- Calculate 75% of number mentally
- Calculate tax and cost with tax
- Calculate discount and sales price
- Given % off and the sales price calculate regular price

like warmup #2



### Quiz Outline

- Convert % to fraction to decimal
- % of a number word problems
  - ex) 30% of 500 left so how many left?
  - ex) 80% of a number is 48, what is the number.
- % decrease =  $\frac{\text{diff}}{\text{original}} \times 100$
- Calculate 20% of 360 mentally (show work)
- Calculate 75% of number mentally
- Calculate tax and cost with tax
- Calculate discount and sales price
- Given % off and the sales price calculate regular price

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



## Attachments

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Extra Practice 4 tax 15 percent.pdf