



## WARM UP GRADE 8

Apr. 2, 2024



Find the price of each with tax:

a)



NOW \$5.99

$$\begin{aligned} \text{Sales tax} &= 15\% \text{ of Price} \\ &= 0.15 \times 5.99 \\ &= 0.8985 \end{aligned}$$

$$= 0.90$$

$$\begin{aligned} \text{Total} &= \text{Price} + \text{Tax} \\ &= 5.99 + 0.90 \\ &= \$6.89 \end{aligned}$$

The total cost of Purex is \$6.89

b) iPad 2  
on Rollback

iPad 2 has a 9.7-inch LED-backlit display, front and back cameras, and up to 10 hours of battery life.\*

**Rollback**  
\$323\* each  
Was \$398

Buy now



$$\begin{aligned} \text{Sales tax} &= 15\% \times 323 \\ &= 0.15 \times 323 \\ &= \$48.45 \end{aligned}$$

$$\begin{aligned} \text{Total} &= \text{Price} + \text{tax} \\ &= 323 + 48.45 \\ &= \$371.45 \end{aligned}$$

The iPad 2 cost \$371.45

398 on sale for 328

$$\% \text{ dec} = \frac{\text{Diff}}{\text{orig}} \times 100 \%$$

$$= \frac{398 - 328}{398} \times 100 \%$$

$$= \frac{70}{398} \times 100 \%$$

$$= 0.176 \times 100 \%$$

17.6 %

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$$4. \text{ a) HST } 15\% \text{ of } 15.00 \\ 0.15 \times 15 \\ 2.25$$

$$b) \text{ HST } 15\% \text{ of } 8.99 \\ 0.15 \times 8.99 \\ 1.35$$

$$c) \text{ HST } 15\% \text{ of } 21.99 \\ 0.15 \times 21.99 \\ 3.23$$

$$5. \text{ a) HST } 15\% \text{ of } 89.97 \\ * 0.15 \times 89.97 \\ 13.50$$

$$* b) \text{ HST } 15\% \text{ of } 24.97 \\ 0.15 \times 24.97 \\ 3.75$$

$$c) \text{ HST } 15\% \text{ of } 17.99 \\ 0.15 \times 17.99 \\ 2.70$$

$$\begin{array}{l}
 \text{b. a) HST} \quad 15\% \text{ of } 7.47 \\
 * \quad \quad \quad 0.15 \times 7.47 \\
 \quad \quad \quad \quad 1.12 \\
 \text{Total} = 7.47 + 1.12 \\
 \quad \quad = 8.59
 \end{array}$$

$$\begin{array}{l}
 \text{b) HST} \quad 15\% \text{ of } 32.99 \\
 * \quad \quad \quad 0.15 \times 32.99 \\
 \quad \quad \quad \quad 4.95 \\
 \text{Total} = 32.99 + 4.95 \\
 \quad \quad = 37.94
 \end{array}$$

$$\begin{array}{l}
 \text{c) HST} \quad 15\% \text{ of } 27.98 \\
 \quad \quad \quad 0.15 \times 27.98 \\
 \quad \quad \quad \quad 4.20 \\
 \text{Total} = 27.98 + 4.20 \\
 \quad \quad = 32.18
 \end{array}$$

$$\begin{array}{l}
 \text{7. (i) HST} \quad 15\% \text{ of } 25.99 \\
 * \quad \quad \quad 0.15 \times 25.99 \\
 \quad \quad \quad \quad 3.90 \\
 \text{Cal} \quad \begin{array}{r} 25.99 \\ + 3.90 \\ \hline 29.89 \end{array}
 \end{array}$$

$$\begin{array}{l}
 * \text{(b) Total Cost} = \text{Price} + \text{tax} \\
 \quad \quad \quad = 25.99 + 3.90 \\
 \quad \quad \quad = 29.89 \\
 \text{Cal}
 \end{array}$$

$$\begin{array}{l}
 \text{(ii) HST} \quad 15\% \text{ of } 152.45 \\
 \quad \quad \quad 0.15 \times 152.45 \\
 \quad \quad \quad \quad 22.87 \\
 \text{skate}
 \end{array}$$

$$\begin{array}{l}
 \text{Total Cost} = \text{Price} + \text{tax} \\
 \quad \quad \quad 152.45 + 22.87 \\
 \quad \quad \quad 175.32 \\
 \text{skate}
 \end{array}$$

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

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

$$\begin{aligned} \text{c) HST} & \quad 15\% \text{ of } 71.99 \\ & \quad 0.15 \times 71.99 \\ & \quad 36.00 \end{aligned}$$

$$\begin{aligned} \text{Total Cost} & = \text{Price} + \text{tax} \\ & \quad 71.99 + 36.00 \\ & \quad 107.99 \end{aligned}$$

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

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

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

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

$$\begin{aligned} 9. \text{ Inc } & 28\% \text{ of price} \\ & 0.28 \times 304\,000 \\ & 85\,120 \end{aligned}$$

$$\begin{aligned} \text{New Price } & 304\,000 + 85\,120 \\ & 389\,120 \end{aligned}$$

$$\begin{aligned} \text{Tax} &= 389\,120 \times 0.15 \\ &= \$58\,368 \end{aligned}$$

$$\begin{aligned} \text{Total} &= 389\,120 + 58\,368 \\ &= \$447\,488 \end{aligned}$$

### Discount and Sales Price

A discount is when they reduce the amount of an item or they put an item on sale.

$$\text{Amount of Discount}^{\text{Saved}} = \text{Rate}^{\%} \text{ of discount} \times \text{Regular Price}$$

$$\text{Sale Price} = \text{Regular Price} - \text{Amount of discount}^{\text{Saved}} \text{ difference}$$

$$\text{The percent discount}^{\% \text{ decrease}} = \frac{\text{Amount of discount}^{\text{Saved}}}{\text{Regular Price}} \times 100\%$$

Example; A stereo regularly sells for \$149.99, but it is on sale for 20% off. (a) Find the amount of discount (b) Find the sale price

(a) Amt. of Discount =  $20\% \text{ of Cost}$   
 $= 0.20 \times 149.99$   
 $= 29.998$   
 $= \$30.00$

Cost - d: \$ amount  
 $= 149.99 - 30$   
 $= \$119.99$

(b) Sale Price = Regular Price - Amt. of Discount

=

2. A jacket that regularly sells for \$72.50 is discounted by 15%. What is the sale price?

Amt. of Dis =  $15\% \text{ of } \$72.50$   
 $\downarrow$   
 $0.15 \times \$72.50$   
 $= 10.875$   
 $= \$10.88$

Sale Price = Cost - Dis \$  
 $= 72.50 - 10.88$   
 $= \$61.62$

# Calculating Discount and Sales Tax

Determine the sale price and then add on the tax!

A video game in New Brunswick is discounted by 30%.  
Its regular price is \$27.99.

- \* a) Calculate the sale price of the video game before taxes.
- \* b) Calculate the sale price of the video game including taxes

a)

$$\begin{aligned}
 \text{Discount} &= 30\% \text{ of Reg Cost} \\
 &= 0.30 \times \$27.99 \\
 &= \boxed{8.397} \\
 &= \$8.40
 \end{aligned}$$

$$\begin{aligned}
 \text{Sales Price} &= \text{Cost} - \text{Discount} \\
 &= \$27.99 - \$8.40 \\
 &= \$19.59
 \end{aligned}$$

$$\begin{aligned}
 \text{b) Tax} &= \text{Cost} \times 15\% \\
 &= \$19.59 \times 0.15 \\
 &= \$2.94
 \end{aligned}$$

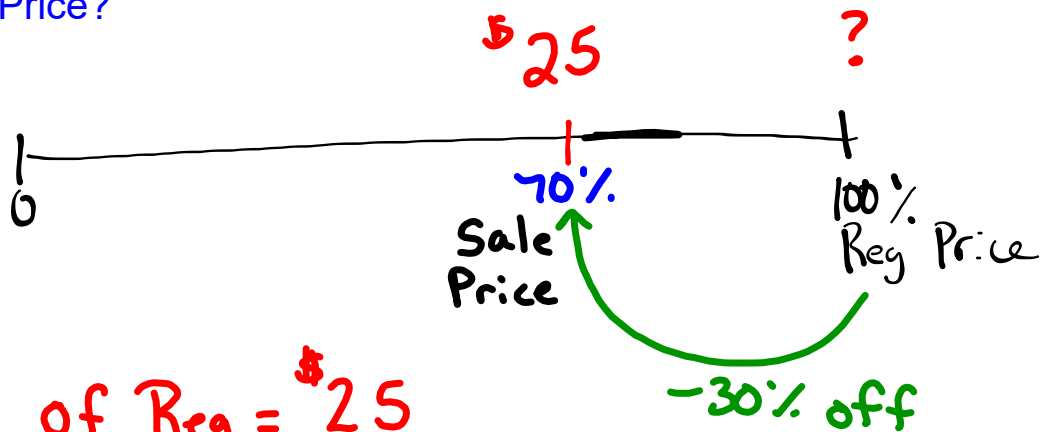
$$\begin{aligned}
 \text{Cost w tax} &= \text{Cost} + \text{tax} \\
 &= 19.59 + 2.94 \\
 &= \$22.53
 \end{aligned}$$



On Quiz

Sale Price

A game is on sale for \$25 which is 30% off Regular Price. What is Regular Price?



$$70\% \text{ of Reg} = \$25$$

$$\downarrow$$

$$0.70 \times R = \$25$$

$$\cancel{0.70} \times R = \$25$$

$$\div 0.70 \quad \div 0.70$$

$$R = \$35.71$$

The regular price was \$35.71.

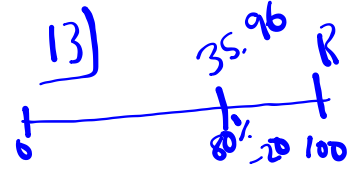
# Class/Homework

Quiz Thursday, April 4

Always use 15% p. diff = Big - Small

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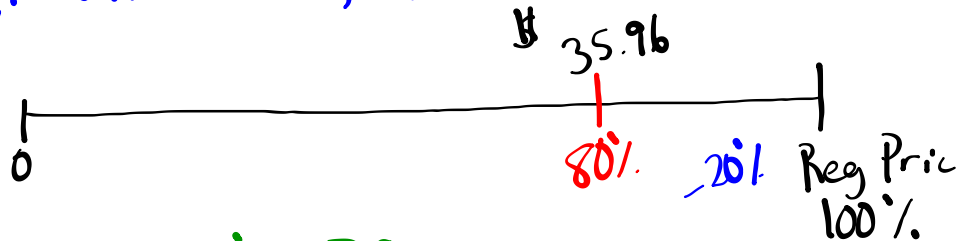
$$\% \text{ diff} = \frac{\text{Diff}}{\text{Orig}} \times 100$$



$$80\% \text{ of } R = 35.96$$

8<sup>2</sup>, ~~10~~, 11, 12, 13, 14, 15  
Microwave

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

$$0.80 \times R = 35.96$$

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

$$R = \$44.95$$

The Regular Price of MP3 player is \$44.95

$$12) R = \$30$$

$$\begin{aligned} \text{Discount 1} &\Rightarrow 25\% \text{ of } \$30 \\ &\quad \downarrow \\ &\quad 0.25 \times 30 \\ &\quad \$7.50 \end{aligned}$$

$$\begin{aligned} \text{New cost} &= \$30 - \$7.50 \\ &= \$22.50 \end{aligned}$$

$$\begin{aligned} \text{Discount 2} &\Rightarrow 25\% \text{ of Again} \\ &= 0.25 \times 22.50 \\ &= \$5.63 \end{aligned}$$

$$\begin{aligned} \text{New Cost} &= 22.50 - 5.63 \\ &= \$16.87 \end{aligned}$$

Not  
same

$$\left. \begin{aligned} &50\% \text{ of } 30 \\ &\frac{1}{2} \text{ off} \\ &= \$15 \end{aligned} \right\}$$

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

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