



WARM UP GRADE 8

Mar. 17, 2016



Find the price of each with tax:

a)



NOW \$5.99

$$\begin{aligned} \text{Sales tax} &= 13\% \text{ of Price} \\ &= 0.13 \times 5.99 \\ &= 0.7787 \\ &= 0.78 \end{aligned}$$

$$\begin{aligned} \text{Total} &= \text{Price} + \text{Tax} \\ &= 5.99 + 0.78 \\ &= \$6.77 \end{aligned}$$

The total cost of Purex is \$6.77

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.¹

Rollback
\$323* each
Was \$398

Buy now



$$\begin{aligned} \text{Sales tax} &= 13\% \times 323 \\ &= 0.13 \times 323 \\ &= \$41.99 \end{aligned}$$

$$\begin{aligned} \text{Total} &= \text{Price} + \text{tax} \\ &= 323 + 41.99 \\ &= \$364.99 \end{aligned}$$

The iPad 2 cost \$364.99

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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$$4. \text{ a) HST } \quad 13\% \text{ of } 15.00 \\ \times \quad 0.13 \times 15 \\ 1.95$$

$$b) \text{ HST } \quad 13\% \text{ of } 8.99 \\ 0.13 \times 8.99 \\ 1.17$$

$$c) \text{ HST } \quad 13\% \text{ of } 21.99 \\ 0.13 \times 21.99 \\ 2.86$$

$$5. \text{ a) HST } \quad 13\% \text{ of } 89.97 \\ * \quad 0.13 \times 89.97 \\ 11.70$$

$$* b) \text{ HST } \quad 13\% \text{ of } 24.97 \\ 0.13 \times 24.97 \\ 3.24$$

$$c) \text{ HST } \quad 13\% \text{ of } 17.99 \\ 0.13 \times 17.99 \\ 2.34$$

b. a) HST
*

$$13\% \text{ of } 7.47 \\ 0.13 \times 7.47 \\ 0.97$$

$$\text{Total} = 7.47 + 0.97 \\ = 7.54$$

b) HST
*

$$13\% \text{ of } 32.99 \\ 0.13 \times 32.99 \\ 4.29$$

$$\text{Total} \\ 32.99 + 4.29 \\ = 37.28$$

c) HST

$$13\% \text{ of } 27.98 \\ 0.13 \times 27.98 \\ 3.64$$

$$27.98 + 3.64 \\ \text{Total} = 31.62$$

7. a) HST
*

$$13\% \text{ of } 25.99 \\ 0.13 \times 25.99 \\ 3.37$$

Car

$$\begin{aligned} * (b) \text{ Total Cost} &= \text{Price} + \text{tax} \\ &= 25.99 + 3.37 \\ &= 29.36 \end{aligned}$$

Car

ii) HST

$$13\% \text{ of } 152.45 \\ 0.13 \times 152.45 \\ 19.82$$

skate

$$\begin{aligned} \text{Total cost} &= \text{Price} + \text{tax} \\ &= 152.45 + 19.82 \\ &= 172.27 \end{aligned}$$

skate

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

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

$$\begin{aligned} \text{c) HST} & \quad 13\% \text{ of } 71.99 \\ & \quad 0.13 \times 71.99 \\ & \quad 9.36 \end{aligned}$$

$$\begin{aligned} \text{Total Cost} & = \text{Price} + \text{tax} \\ & \quad 71.99 + 9.36 \\ & \quad 81.35 \end{aligned}$$

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

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

$$\begin{aligned} \text{HST} & \quad 13\% \text{ of } 66 \\ & \quad 0.13 \times 66 \\ & \quad 8.58 \end{aligned}$$

$$\begin{aligned} \text{Total Cost} & = \text{Price} + \text{tax} \\ & = 66 + 8.58 \\ & = 74.58 \end{aligned}$$

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

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

$$\begin{aligned} \text{Tax} &= 389\,120 \times 0.13 \\ &= \$50\,585.60 \end{aligned}$$

$$\begin{aligned} \text{Total} &= 389\,120 + 50\,585.6 \\ &= \$439\,705.60 \end{aligned}$$

Discount and Sales Price

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

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

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

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

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 = Rate of discount x Regular price

$$\begin{aligned} \text{Savings} &= 20\% \times 149.99 \\ &= 0.20 \times 149.99 \\ &= 29.998 \end{aligned}$$

(b) Sale Price = \$30.00

$$\begin{aligned} &= \text{Reg} - \text{Amount discount} \\ &= 149.99 - 30.00 \\ &= \$119.99 \end{aligned}$$

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

$$\begin{aligned} \text{Amount Discount} &= 15\% \text{ of } 72.50 \\ &= 0.15 \times 72.50 \\ &= 10.88 \end{aligned}$$

$$\begin{aligned} \text{Sales Price} &= \text{Reg} - \text{Amount Dis} \\ &= 72.50 - 10.88 \\ &= 61.62 \end{aligned}$$

$$\begin{aligned} \text{Tax} &= 13\% \times 61.62 \\ &= 0.13 \times 61.62 \\ &= 8.01 \end{aligned}$$

$$\begin{aligned} \text{Price w Tax} &= 61.62 + 8.01 \\ &= \$69.63 \end{aligned}$$

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 tax

$$\begin{aligned}
 \text{a) Amount Discounted} &= \text{Rate} \times \text{Reg Price} \\
 &= 30\% \times 27.99 \\
 &= 0.30 \times 27.99 \\
 &= 8.40
 \end{aligned}$$

$$\begin{aligned}
 \text{Sales Price} &= \text{Reg Price} - \text{Amount Discounted} \\
 &= 27.99 - 8.40 \\
 &= 19.59
 \end{aligned}$$

$$\begin{aligned}
 \text{b) Tax} &= 13\% \times \text{Price} \\
 &= 0.13 \times 19.59 \\
 &= 2.55
 \end{aligned}$$

$$\begin{aligned}
 \text{Cost w tax} &= \text{Sale Price} + \text{tax} \\
 &= 19.59 + 2.55 \\
 &= \$22.14
 \end{aligned}$$

Class/Homework

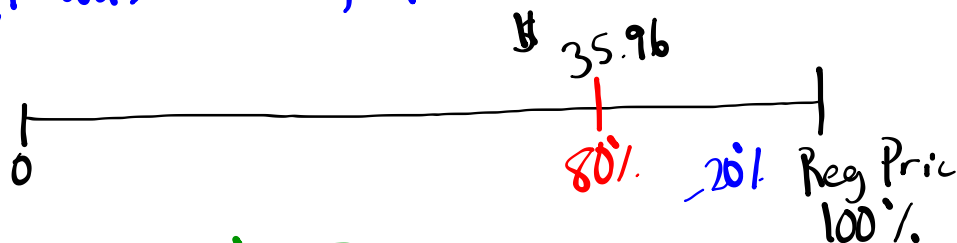
Quiz Tuesday, Mar. 22

Always use 13%

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8², ~~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

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

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