



WARM UP GRADE 8



Quiz Wednesday on sales tax and discount

Find the price of each with tax:

a)



NOW \$5.99

$$\begin{aligned} \text{Tax} &= 15\% \text{ of Price} \\ &= 0.15 \times 5.99 \\ &= 0.90 \end{aligned}$$

$$\begin{aligned} \text{Cost with tax} &= 5.99 + 0.90 \\ &= \$6.89 \end{aligned}$$

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



$$\begin{aligned} \text{Tax} &= 323 \times 0.15 \\ &= \$48.45 \end{aligned}$$

$$\begin{aligned} \text{Cost w tax} &= 323 + 48.45 \\ &= \$371.45 \end{aligned}$$

BONUS: Could you tell me the % decrease?

$$\text{Original } 398 \rightarrow 323$$

$$\text{Diff} = 75$$

$$\frac{\text{Diff}}{\text{orig}} \times 100$$

$$\frac{75}{398} \times 100$$

$$0.188 \times 100$$

$$18.8\%$$



WARM UP GRADE 8

Mar. 17, 2016



Find the price of each with tax:

a)



NOW \$5.99

$$\begin{aligned} \text{Sales tax} &= 15\% \text{ of Price} \\ &= 0.15 \times 5.99 \\ &= 0.8985 \\ &= 0.90 \end{aligned}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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 = $20\% \text{ of Reg. Price}$
 $= 0.20 \times \$149.99$
 $= \$29.998$
 $\approx \$30.00$

(b) Find the sale price
 $\text{Reg. Price} - \text{Discount}$
 $\$149.99 - \30.00
 $= \$119.99$

(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 = $15\% \text{ of Reg. Price}$
 $= 0.15 \times \$72.50$
 $= \$10.88$

Sale Price = $\text{Reg. Price} - \text{Amount of Discount}$
 $= 72.50 - 10.88$
 $= 61.62$

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

$$\begin{aligned}
 \text{a) Saving} &= 30\% \text{ of Reg} \\
 \text{Saving} &= 0.30 \times 27.99 \\
 \text{Saved} &= \$8.40
 \end{aligned}$$

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

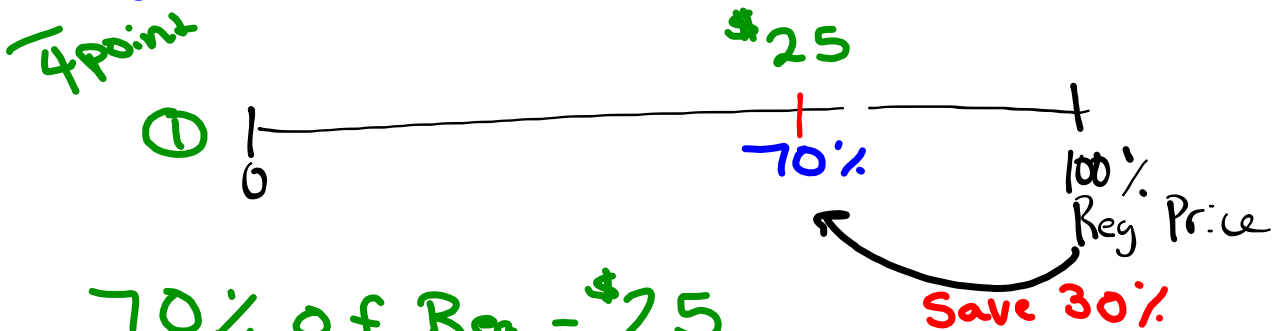
$$\begin{aligned}
 \text{b) Cost with tax} &= 1.15 \times \text{Price} \\
 &= 1.15 \times 19.59 \\
 &= \$22.53
 \end{aligned}$$

$$\begin{aligned}
 \text{Tax} &= 15\% \text{ of Price} \\
 &= 0.15 \times 19.59 \\
 &= 2.94
 \end{aligned}$$

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

* good question for quiz

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



① 70% of Reg = \$25

① $0.70 \times n = \$25$

① $\frac{0.70 \times n}{0.70} = \frac{25}{0.70}$

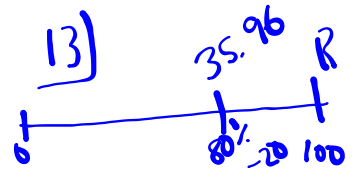
① $n = \$35.71$

Class/Homework

Quiz

Always use 15%

Homework pg. 260 # 8,10-17



80% of R = 35.96

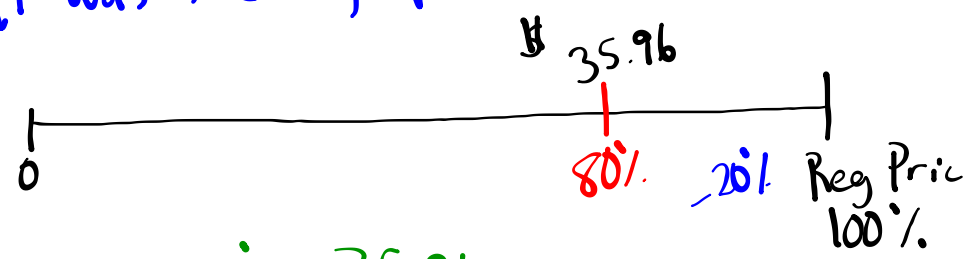
82
Microwave

11
D:CC
GVI
x 100

13
*
94.2

15

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

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

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