



WARM UP GRADE 8

Mar. __, 2017

Quiz wednesday, Mar. 22



Find the price of each with tax:

a)



NOW \$5.99

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

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

The Purex soap is \$6.89 with tax

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



Could you tell me the % decrease?

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

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

Original 398
Sale 323

$$\begin{aligned} \text{Difference} &= 398 - 323 \\ &= \$75 \end{aligned}$$

$$\begin{aligned} \% \text{ Dec} &= \frac{\text{Diff}}{\text{Orig}} \times 100 \\ &= \frac{\$75}{\$398} \times 100 \\ &= 0.1884 \times 100 \\ &\approx 18.84\% \\ &\approx 19\% \end{aligned}$$



WARM UP GRADE 8

Mar. 17, 2016



Find the price of each with tax:

a)



NOW \$5.99

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

$$= 0.90$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Discount and Sales Price

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

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

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

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

% dec

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

$$\begin{aligned} \text{(a) Amt. of Discount} &= \overset{\text{Saved}}{\text{Rate of discount}} \times \overset{\text{Reg Price}}{\text{Regul}} \\ &= 20\% \text{ of } 149.99 \\ &= 0.2 \times 149.99 \\ &= 30 \end{aligned}$$

$$\begin{aligned} \text{(b) Sale Price} &= \text{Regular Price} - \overset{\text{Saved}}{\text{Amt. of Discount}} \\ &= 149.99 - 30 \\ &= \$119.99 \end{aligned}$$

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

$$\begin{aligned} \text{Amount Discount} &= \text{Rate} \times \overset{\text{orig}}{\text{Price}} \\ &= 15\% \times \$72.50 \\ &= 0.15 \times \$72.50 \\ &= \$10.88 \end{aligned}$$

$$\begin{aligned} \text{New Sales Price} &= \text{Orig} - \text{Amount Saved} \\ &= \$72.50 - \$10.88 \\ &= \$61.62 \end{aligned}$$

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

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

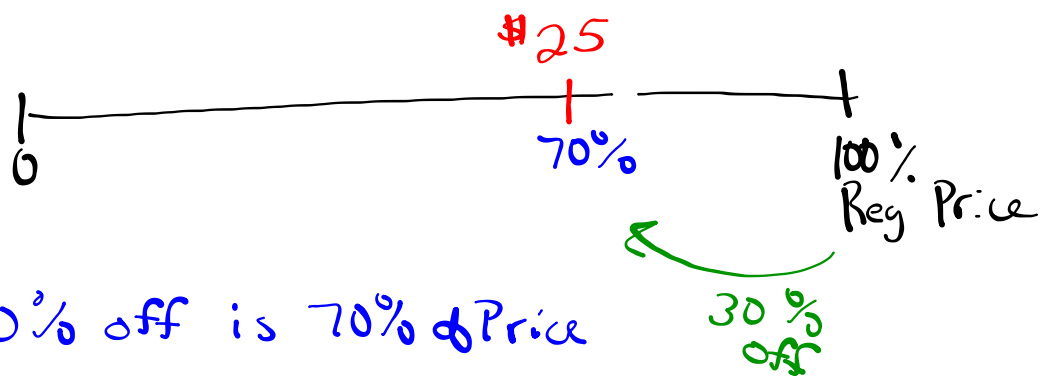
$$\begin{aligned} \text{Sales Price} &= \text{Reg} - \text{Saved} \\ &= 27.99 - 8.40 \end{aligned}$$

$$\boxed{\text{Sale Price} = \$19.59}$$

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

$$\begin{aligned} \text{Total Cost} &= \text{Sale Price} + \text{tax} \\ \text{With} & \\ \text{Tax} &= 19.59 + 2.94 \\ &= \$22.53 \end{aligned}$$

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



30% off is 70% of Price

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

$$0.70 P = \$25$$

$$\frac{0.70 P}{0.70} = \frac{\$25}{0.70}$$

$$P = \$37.71$$

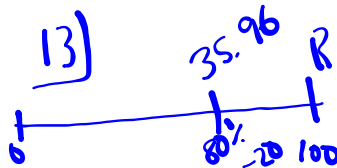
So Regular Price was \$37.71

Class/Homework

Quiz _____, Mar. _____

Always use 15%

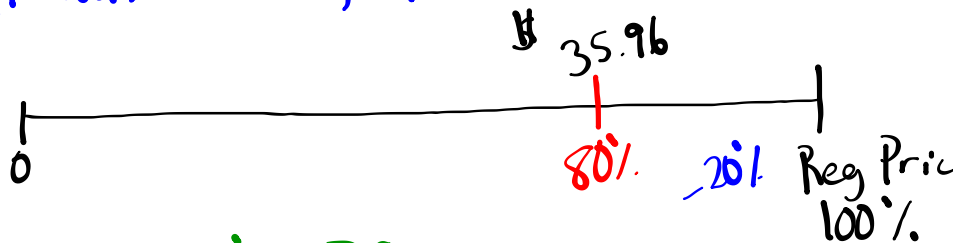
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8², ~~10~~, 11, 12, 13, ~~14~~, 15
Microwave

80% of R = 35.96

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

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

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