



WARM UP GRADE 8

Mar. 9, 2020

Quiz Wed, Mar. 11



Find the price of each with tax:

a)



$$\begin{aligned} \text{Tax} &= 15\% \times \text{Cost} \\ &= 0.15 \times 5.99 \\ &= 0.895 \\ &\approx 0.90 \end{aligned}$$

NOW \$5.99

+ 0.90

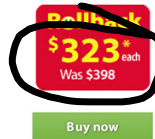
6.89

About \$6.89

b)

iPad
on Rollback

is a 9.7-inch iPad with 128GB of storage, front and back cameras, and up to 10 hours of battery life.



Buy now



\$398 → \$323

Could you tell me the % decrease?

$$\begin{aligned} \text{b) } \% \text{ dec} &= \frac{\text{Diff}}{\text{orig}} \times 100 \\ &= \frac{75}{398} \times 100 \\ &= 0.18 \times 100 \\ &= 18\% \\ \text{Save } 18\% \end{aligned}$$

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

$$\begin{aligned} \text{Tax} &= 323 \times 0.15 \\ &= 48.75 \\ \text{Cost + tax} &= 323 + 48.75 \end{aligned}$$



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\text{Total Cost} = \text{Price} + \text{tax} \\ 71.99 + 36.00 \\ 107.99$$

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

$$\text{Sale Price} = \text{Price} - \text{Disc} \\ = 120 - 54 \\ = 66$$

$$\text{HST} \quad 15\% \text{ of } 66 \\ 0.15 \times 66 \\ 9.90$$

$$\text{Total Cost} = \text{Price} + \text{tax} \\ = 66 + 9.90 \\ = 75.90$$

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

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

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

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

Discount and Sales Price

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

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

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

$$\overset{\% \downarrow \text{ decrease}}{\text{The percent discount}} = \frac{\overset{\text{difference}}{\text{Amount of discount}}}{\overset{\text{Reg Price}}{\text{Regular Price}}} \times 100\% \quad \text{Rate}$$

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

$$\begin{aligned} \text{(a) Amt. of Discount} &= \text{Rate of discount} \times \text{Regular price} \\ &= 20 \% \text{ of } 149.99 \\ &= 0.2 \times 149.99 \\ &= 30 \end{aligned}$$

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

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

$\begin{aligned} \text{Amt. of Dis} &= \text{Rate} \times \text{reg. Price} \\ &= 0.15 \times 72.50 \\ &= 10.88 \end{aligned}$	$\begin{aligned} \text{Sale Price} &= \text{Reg.} - \text{Dis.} \\ &= 72.50 - 10.88 \\ &= \$61.62 \end{aligned}$
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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 taxe

$$\begin{aligned}
 \text{a) Discount} &= 30\% \text{ of Reg} \\
 &= 0.30 \times \$27.99 \\
 &= \$8.39
 \end{aligned}$$

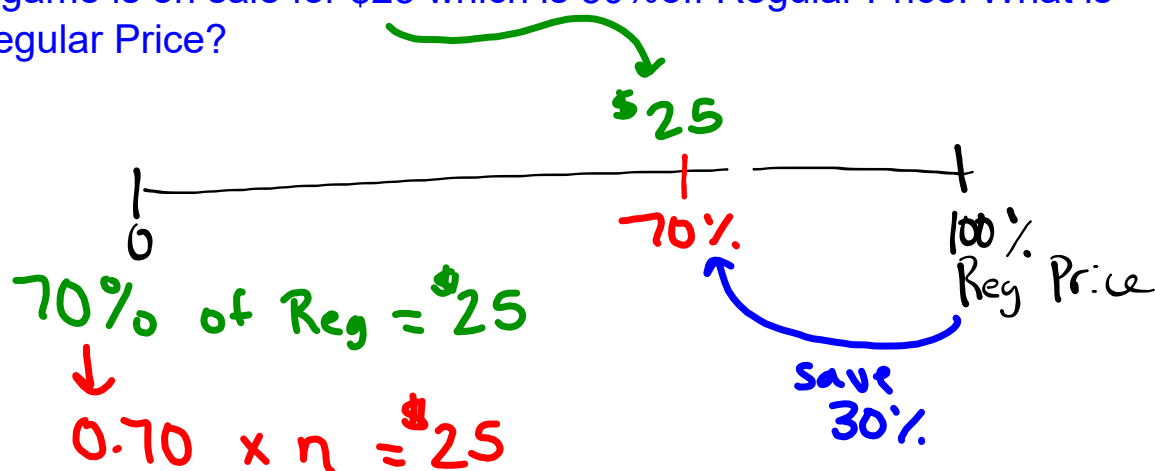
$$\begin{aligned}
 \text{Sales Price} &= \text{Reg} - \text{Discount} \\
 &= \$27.99 - 8.39 \\
 &= \$19.60
 \end{aligned}$$

$$\begin{aligned}
 \text{b) Tax} &= 15\% \times \$19.60 \\
 &= 0.15 \times 19.60 \\
 &= \$2.94
 \end{aligned}$$

$$\begin{aligned}
 \text{Cost with tax} &= \$19.60 + \$2.94 \\
 &= \$22.54
 \end{aligned}$$

Similar to test question

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



$$\frac{0.70n}{0.70} = \frac{25}{0.70}$$
$$n = \$35.70$$

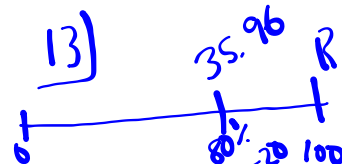
Class/Homework

$$\% \text{Discount} = \frac{\text{D. diff}}{\text{Orig}} \times 100$$

Quiz Wed Mar 11

Always use 15%

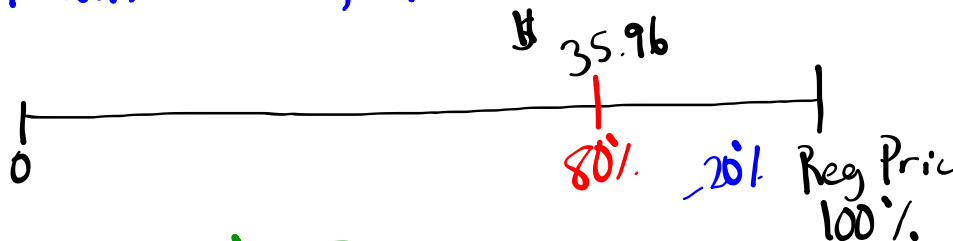
Homework pg. 260



8², 11, 13, 15
Microwave

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

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?



$$80\% \text{ of Reg is } 35.96$$

$$0.80 \times R = 35.96$$

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

$$R = \$44.95$$

The regular price of MP3 player is \$44.95

$$15) \quad 67\% \text{ of Reg Price} = 28 - 38$$

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