

3-6-19

Aim: SWBAT apply knowledge of conversions to complete multistep problems.

HW: Packet Page 21

Quiz Friday

Test Wednesday

Do Now: Packet Page 20

100% original

-
35% discount

65% sale price

HOMWORK

1. The wholesale price of a shirt is \$15. A store marks up the price by 75%. When the shirts don't sell, the store offers a 20% discount. What is the sale price of the shirts?

let x = amt. of markup

$$\frac{x}{15} = \frac{75}{100}$$

$$\frac{100x}{100} = \frac{1125}{100}$$

$$x = 11.25$$

$$\begin{array}{l} \$15 + \$11.25 \\ \hline \$26.25 \\ \text{Retail Price} \end{array}$$

let y = amt. of discount

$$\frac{y}{26.25} = \frac{20}{100}$$

$$\frac{100y}{100} = \frac{525}{100}$$

$$y = 5.25$$

$$\begin{array}{l} \$26.25 - \$5.25 \\ \hline \$21.00 \\ \text{Sale Price} \end{array}$$

2. You order a pizza to be delivered. The bill comes to \$12.60. You pay \$15 and tell the delivery person to, "keep the change". Is your tip more or less than 20%? Explain.

$$\$15 - \$12.60 = \$2.40$$

$$\frac{2.40}{12.60} = \frac{r}{100}$$

$$\frac{12.60r}{12.60} = \frac{240}{12.60}$$

$$r = 19\frac{1}{3}\%$$

The tip is a little less than 20%.

3. A DVD has a regular price of \$26 and is on sale for \$16.90. What is the percent discount? How much would a \$59 DVD boxed set cost if it has the same discount?

$$26 - 16.90 = 9.10 \text{ amt. of discount}$$

$$\frac{9.10}{26} = \frac{r}{100}$$

$$\frac{26r}{26} = \frac{910}{26}$$

$$r = 35$$

The discount is 35% off.

let x = amt. of discount

$$\frac{x}{59} = \frac{35}{100}$$

$$\frac{100x}{100} = \frac{2065}{100}$$

$$x = 20.65$$

$$\$59 - \$20.65$$

$$\begin{array}{l} \$38.35 \\ \text{Sale Price of Boxed Set} \end{array}$$

* 4. A basketball has a wholesale price of \$12 and is marked up 115%. Later it is discounted 15%. The sales tax is 4.5%. Find the final cost of the basketball including tax.

let x = amt. of markup

$$\frac{x}{12} = \frac{115}{100}$$

$$\frac{100x}{100} = \frac{1380}{100}$$

$$x = 13.80$$

$$\begin{array}{l} \$12 + \$13.80 \\ \hline \$25.80 \\ \text{Retail Price} \end{array}$$

let y = amt. of discount

$$\frac{y}{25.80} = \frac{15}{100}$$

$$\frac{100y}{100} = \frac{387}{100}$$

$$y = 3.87$$

$$\$25.80 - \$3.87$$

$$\begin{array}{l} \$21.93 \\ \text{Sale Price} \end{array}$$

let z = amt. of tax

$$\frac{z}{21.93} = \frac{4.5}{100}$$

$$\frac{100z}{100} = \frac{98.685}{100}$$

$$z = 0.98685$$

$$z \approx 0.99$$

$$\$21.93 + \$0.99$$

$$\begin{array}{l} \$22.92 \\ \text{Total Price} \end{array}$$

Aim: SWBAT apply knowledge of conversions to complete multistep problems.

Do Now: Complete the table.

	A	B	C
1	What is 105% of 100?	What is 125% of 100?	What is 150% of 100?
	105	125	150

- * 1. A jacket is on sale for \$48. It is 60% off the regular price. What was the regular price of the jacket?
- sale price*
 $100\% - 60\% = 40\%$
paying this much of the regular price
 $\frac{48}{x} = \frac{40}{100}$
 $40x = 4800$
 $x = 120$
let x = the reg. price
The reg. price was \$120.
- * 2. Jean paid \$236.25 for a food processor. The price included 6% sales tax. How much was the tax?
- $100\% + 6\% = 106\%$
 $\frac{236.25}{x} = \frac{106}{100}$
 $106x = 23625$
 $x = 222.877\dots$
 $x \approx 222.88$
 $\begin{array}{r} \$236.25 \\ - 222.88 \\ \hline \$13.37 \end{array}$
let x = retail price
3. Rob paid \$27.96 for a computer game. This is 20% off the original price. What was the original price of the computer game?
- sale price*
 $100\% - 20\% = 80\%$
 $\frac{27.96}{x} = \frac{80}{100}$
 $80x = 2796$
 $x = 34.95$
let x = the original price
4. Mrs. Smith paid \$177.65 for two new tires. This included 4.5% sales tax. How much was the tax?

$$100\% + 4.5\% = 104.5\%$$

let x =

$$\frac{177.65}{x} = \frac{104.5}{100}$$

5. A necklace costs \$68.25, including tax. If \$3.25 of the \$68.25 is tax, what percent of the cost is tax?

6. Mrs. Cramer received \$360 commission for the sale of a boat. Her commission rate is 10%. What was the selling price of the boat?

7. Mr. Porter sold 10 sets of books for \$79.95 each. He received a commission of \$159.90. Find his rate of commission.

8. The regular price of a bike is \$148. If there is an 18% discount and 7.5% sales tax, how much does the bike cost?