

3-3-17

Aim: SWBAT apply knowledge of conversions to complete multi-step problems.

Do Now: Patel Problem

HW: Pg. 373 - 374 # 16, 27- 29, 32 - 34, 36, 37

Test Wednesday

03-12-13 Gratuity and Commission.notebook

March 10, 2014

Patel bought a model rocket kit from a catalog. The price of the kit was \$124.95. The state sales tax of 7% was added, and then a \$10 charge for shipping was added after the sales tax. What was the total amount Patel paid, including tax and shipping cost?

Show your work.

$$(0.07)(\$124.95) = \$8.7465 \text{ tax}$$

$$\$124.95 + \$8.7465 + \$10 = \$143.6965$$

$$\approx \$143.70$$

Answer \$143.70

Patel received an allowance of \$15 per week. How many weeks will it take him to purchase the kit?

Show your work.

$$\$143.70 \div 15 = 9.58$$

$$\approx 10$$

Answer 10 weeks

Multi-Step Word Problems.

The regular price of a computer desk is \$329.89. If there is a 15% discount and $8\frac{1}{4}\%$ sales tax, how much does the desk cost?

$$100\% - 15\% = 85\%$$

$$(0.85)(329.89) = \$280.4065$$

Sale price

$$\begin{array}{l} 100\% \\ \text{Sale price} \end{array} + \begin{array}{l} 8\frac{1}{4}\% \\ \text{tax} \end{array} = 108\frac{1}{4}\%$$

$$(1.0825)(280.4065) = 303.5400363$$

$$\$303.54$$

Multi-Step Word Problems.

The regular price of a computer desk is \$329.89. If there is a 15% discount and $8\frac{1}{4}\%$ sales tax, how much does the desk cost?

Part 1: Sale Price

$$\frac{x}{329.89} = \frac{15}{100}$$

$$\frac{100x}{100} = \frac{4948.35}{100}$$

$$x = 49.4835 \text{ savings}$$

$$\$329.89 - \$49.4835 = \$280.4065$$

Sale price

Part 2: Tax the Sale Price

$$\frac{x}{280.4065} = \frac{8\frac{1}{4}}{100}$$

$$\frac{100x}{100} = \frac{2313.353625}{100}$$

$$x = 23.13353625 \text{ tax}$$

$$\begin{array}{r} 280.4065 + \\ 23.13353625 \\ \hline \end{array}$$

303.5400 ...

\$303.54

Marie, Michelle, and Gayle went out to lunch together. The total bill for their meal was \$47.65. If they want to leave the waitress a 15% tip, what is the total cost of their lunch including tip?

$$100\% + 15\% = 115\%$$

$$(1.15)(\$47.65) = \$54.7975$$

$$\$54.80$$

Marie, Michelle, and Gayle went out to lunch together. The total bill for their meal was \$47.65. If they want to leave the waitress a 15% tip, what is the total cost of their lunch including tip?

$$(0.15)(47.65) = \$7.1475 \text{ tip}$$

$$\$47.65 + \$7.1475 = \$54.7975$$

$$\$54.80$$

Marie, Michelle, and Gayle went out to lunch together. The total bill for their meal was \$47.65. If they want to leave the waitress a 15% tip, what is the total cost of their lunch including tip?

$$\frac{x}{47.65} = \frac{15}{100}$$

$$\frac{100x}{100} = \frac{714.75}{100}$$
$$x = \$7.1475$$

tip

$$\$47.65 + \$7.1475$$

$$\$54.7975$$

$$\$54.80$$

Pg. 374 # 35

The 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 box set cost if it has the same discount?

$$26 - 16.90 = 9.10$$

amt. of
discount

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

$$\frac{\cancel{26}x}{\cancel{26}} = \frac{910}{26}$$

$$x = 35$$

35% discount

$$100\% - 35\% = 65\%$$

$$(0.65)(59) = \$38.35$$

Pg. 374 # 35

The 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 box set cost if it has the same discount?

$$26 - 16.90 = \$9.10$$

amt. of
discount

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

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

$$x = 35$$

35% off

$$(0.35)(59) = \$20.65$$

amt. of
discount

$$\$59 - 20.65 = \$38.35$$

Pg. 374 # 39

*
A total bill (including sales tax and tip), is \$33. The tax is 4% and the tip is 16% of the bill before tax. Find the cost before tax and tip.

$$100\% + 4\% + 16\% = 120\%$$

$$\frac{33}{x} = \frac{120}{100}$$

$$\frac{120x}{120} = \frac{3300}{120}$$

$$x = \$27.50$$

A group of friends went to lunch. The bill, before sales tax and tip, was \$37.50. A sales tax of 8% was added. The group then tipped 18% on the amount after the sales tax was added. What was the amount, in dollars, of the sales tax? What was the total amount the group paid, including tax and tip?

Food Bill: \$37.50

Tax: 8%

Tip: 18%

Tax: ?

Total: ?

$$(0.08)(\$37.50) = \$3.00 \text{ tax}$$

$$\$37.50 + \$3.00 = \$40.50 \text{ Food bill + tax}$$

$$(0.18)(\$40.50) = \$7.29 \text{ Tip}$$

$$\$40.50 + \$7.29 = \$47.79$$

Total