

3-6-17

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

Do Now: WS

HW: Review WS

Test Wednesday

David bought a computer that was 20% off the regular price of \$1,080. If an 8% sales tax was added to the cost of the computer, what was the total price David paid for it?

- A** \$302.40
- B** \$864.00
- C** \$933.12
- D** \$1,382.40

Suzanne bought a sweater at the sale price of \$25. The original cost of the sweater was \$40. What percent represents the discount that Suzanne received when buying the sweater?

- A** 15%
- B** 37.5%
- C** 60%
- D** 62.5%

Leo bought a used car for  $x$  dollars. One year later the value of the car was  $0.88x$ . Which expression is another way to describe the change in the value of the car?

- A** 0.12% decrease
- B** 0.88% decrease
- C** 12% decrease
- D** 88% decrease

Julia's service charge at a beauty salon was \$72.60, before tax. The sales tax rate was 8%. If she added 20% of the amount before tax as a tip, how much did she pay for the service at the salon?

- A** \$87.12
- B** \$92.93
- C** \$100.60
- D** \$145.20

03-12-13 Gratuity and Commission.notebook

March 10, 2014

David bought a computer that was 20% off the regular price of \$1,080. If an 8% sales tax was added to the cost of the computer, what was the total price David paid for it?

- A \$302.40
- B \$864.00
- C \$933.12
- D \$1,382.40

$$(0.20)(\$1080) = \$216 \text{ amt. of discount}$$

$$\$1080 - \$216 = \$864 \text{ sale price}$$

$$(0.08)(\$864) = \$69.12 \text{ tax}$$

$$\$864 + \$69.12 = \$933.12$$

Suzanne bought a sweater at the sale price of \$25. The original cost of the sweater was \$40. What percent represents the discount that Suzanne received when buying the sweater?

- A 15%
- B 37.5%
- C 60%
- D 62.5%

$$\$40 - \$25 = \$15$$

$$\frac{\$15}{\$40} = \frac{r}{100}$$

$$\frac{40r}{40} = \frac{1500}{40}$$

$$r = 37.5$$

$$R = 37.5\%$$

Leo bought a used car for  $x$  dollars. One year later the value of the car was  $0.88x$ . Which expression is another way to describe the change in the value of the car?

- A 0.12% decrease
- B 0.88% decrease
- C 12% decrease
- D 88% decrease

$$100\% \quad 88\%$$

$$1x - 0.88x$$

$$100\% - 88\% = 12\%$$

Julia's service charge at a beauty salon was \$72.60, before tax. The sales tax rate was 8%. If she added 20% of the amount before tax as a tip, how much did she pay for the service at the salon?

- A \$87.12
- B \$92.93
- C \$100.60
- D \$145.20

$$(0.08)(\$72.60) = \$5.808 \text{ tax}$$

$$(0.20)(\$72.60) = \$14.52 \text{ tip}$$

$$\$72.60 + \$5.808 + \$14.52 = \$92.928$$

$$\$92.93$$

## Lesson 7.5 PRACTICE C # 1-5 odd

① \$36,000 to \$40,000

$$\$40,000 - \$36,000 = \$4,000$$

$$\frac{\$4,000}{\$36,000} = \frac{r}{100}$$

$$\frac{36,000r}{36,000} = \frac{400,000}{36,000}$$

$$r = 11.1111\dots$$

$$R \approx 11.11\% \text{ increase}$$

③ 5.42 minutes to 5.2 minutes

$$5.42 - 5.2 = 0.22$$

$$\frac{0.22}{5.42} = \frac{r}{100}$$

$$\frac{5.42r}{5.42} = \frac{22}{5.42}$$

$$r = 4.05904\dots$$

$$R \approx 4.06\% \text{ decrease}$$

⑤ 89 hits to 120 hits

$$120 - 89 = 31$$

$$\frac{31}{89} = \frac{r}{100}$$

$$\frac{89r}{89} = \frac{3100}{89}$$

$$r = 34.83146\dots$$

$$R \approx 34.83\% \text{ increase}$$

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

- ⑩ The original cost of an item is \$28. It has a 5% discount and a 5% sales tax. A friend says that the item should cost \$28 after the discount and sales tax. Describe an correct the error in your friend's reasoning.

The discount does not balance out the sales tax because the sales tax is based on the discount price.

- ⑫ Your food bill at a restaurant is \$30. You leave a 20% tip. The sales tax is 6%. What is the total cost of the meal.

$$(0.06)(\$30) = \$1.80$$

tax

$$(0.20)(\$30) = \$6.00$$

tip

$$\$30 + \$1.80 + \$6.00 = \boxed{\$37.80}$$

- ⑬ A book costs \$12.95 and is on sale for 15% off. The sales tax is 6%. What is the total cost of the book?

①  $(0.15)(\$12.95) = \$1.9425$

discount amt.

②  $\$12.95 - \$1.9425 = \$11.0075$

sale price

③  $(0.06)(\$11.0075) = \$0.66045$

tax

④  $\$11.0075 + \$0.66045 = \$11.66795$

$$\approx \boxed{\$11.67}$$

B

- 29) You and two friends eat at a restaurant and split the total bill evenly. The food bill is \$20.88. Sales tax is 5%. You leave a 20% tip. How much should each person pay?

$$(0.05)(\$20.88) = \$1.044$$

↑ tax

$$\$20.88 + \$1.044 + \$4.176$$

$$= \$26.10$$

$$(0.20)(\$20.88) = \$4.176$$

↑ tip

$$\$26.10 \div 3 = \$8.70$$

D

- 32) ~~Though gasoline prices may change quickly, the markup is usually \$0.12 per gallon, what percent is that if the wholesale price is \$3 per gallon?~~

~~$$\frac{\$0.12}{\$3} = \frac{r}{100}$$~~

~~$$\frac{3r}{3} = \frac{12}{3}$$~~

~~$$r = 4$$~~

~~$$R = 4\%$$~~

- 33) ~~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.~~

~~$$(0.75)(\$15) = \$11.25$$~~

~~↑ markup amt.~~

~~$$\$15 + \$11.25 = \$26.25$$~~

~~↑ retail price~~

~~$$(0.20)(\$26.25) = \$5.25$$~~

~~↑ discount amt.~~

~~$$\$26.25 - \$5.25 = \$21.00$$~~

34) 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 15%. Explain.

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

$$10\% \text{ of } \$12.60 \text{ is } \$1.26$$

$$20\% \text{ of } \$12.60 \text{ is } \$2.52$$

$\$2.40$  is less than 20%.

\* 36) 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. Round to the nearest cent.

$$\downarrow \text{115\%}$$

$$(1.15)(\$12) = \$13.80$$

↑  
amt. of

$$\$12 + \$13.80 = \$25.80$$

↑  
markup

↑  
retail price

$$\uparrow \text{15\%}$$

$$(0.15)(\$25.80) = \$3.87$$

savings

$$\$25.80 - \$3.87 = \$21.93$$

↑  
sale price

$$\uparrow \text{4.5\%}$$

$$(0.045)(\$21.93) = \$0.98685$$

↑  
tax

$$\$21.93 + 0.9865$$

$$= \$22.9165$$

$\approx \$22.92$

37) A store is having a sale offering a discount of 40% on all coats. One week later the store discounts the coats an extra 60%. Is the store giving away the coats for free? Explain.

No because the extra 60% discount applies to the already discounted price.

Name \_\_\_\_\_

Date \_\_\_\_\_

Review

Period \_\_\_\_\_

Insert the words from the box into the correct place in each formula.

Price
Total Price
Tax

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Sale Price
Discount
Original Price

$$\underline{\hspace{2cm}} - \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Markup
Retail Price
Wholesale Price

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Complete the following chart.

FRACTION	PERCENT	DECIMAL
$\frac{23}{10}$	1.	2.
3.	4.	1.04
5.	56.25%	6.
7.	$8\frac{2}{3}\%$	8.

11. Write 2.735 as a percent?

13. If the sales tax is  $5\frac{1}{2}\%$ , what is the sales tax on a jacket priced at \$45.89?

14. If George earns 13.5% commission on his sales, how much does he earn if he sells \$2042.98 worth of merchandise?



Name \_\_\_\_\_

Date \_\_\_\_\_

**Review**

Period \_\_\_\_

15. The regular price of a microwave is \$289.59. If it is discounted 20%, what is the sale price?

16. Which of the following is the amount of interest earned when \$2275 is invested at 18% for  $3\frac{1}{2}$  years?

17. If a house valued at \$65,000 increases in value by 9%, what is the new value of the house?

18. If last year's taxes were \$847.89 and this year's taxes are \$932.13, what is the percent of increase in taxes?

20. Joann paid \$27 for a pair of jeans? The following week, there was a 20% discount on the jeans. How much would Joann have saved if she had waited to buy the jeans?

22. The regular price of a shirt is \$45.95. If there is a 30% discount and a 6% sales tax, what is the **total cost** of the shirt?

23. At a restaurant, the food bill comes to \$27.63. The sales tax is 6% and you are leaving an 18% tip. What is the **total cost** of the meal?

24. The wholesale price of a couch is \$235. A store marks up the price by 169%. When the couch does not sell, the store offers a 20% discount. What is sale price of the couch?