

Name _____

Date _____

Mr. Tallman

(2)

Do Now

Thomas wants to buy a pair of jeans that regularly cost \$44. Their jeans are on sale for 35% off. The tax rate is 8.5% and is applied to the sale price.

Part A) What is the sale price of the jeans?

orig: 44 disc = orig(1 - r) 44 - 15.40

disc: x x = 44(.35) **\$26.60**

r: 35% x = \$15.40

Part B) What is the tax amount? (REMEMBER: apply the tax percent to the sale price)

orig: 26.60 tax = orig(r) ~~26.60 + 2.26 = \$28.86~~

tax: x x = 26.60(.085) **\$2.26**

r: 8.5% x = \$2.26

Part C) What is the final cost of the pair of jeans?

26.60 + 2.26 = **\$28.86**

Lesson #40 - Multi-Step Percents Day Two

Tips for Multi-Step Percent Problems

- When solving a problem involving discount and tax, remember to find the discount first. Then find the tax on the sale price.
- When solving a problem with two discounts, find the discounts in the order that the problem gives the discounts.
- When solving a problem with tax and tip, always find the tax and tip amounts based on the original price.

Example 1) The restaurant bill is \$70. The sales tax is 7% and you would like to leave a 20% tip. Find the total cost of the meal. 27% increase

orig: 70 x = .27(70)

tax/tip: x x = \$18.90

r: 27% 70 + 18.90 = **\$88.90**

Example 2) On David's vacation, he went on a tour for \$150. There is a 4% sales tax on all tours. ~~David wants to tip the tour guide 15%.~~ Discount = 15%.

Part A) ~~How much tax will David be charged?~~

What is the cost after the discount?

orig: 150

$$\text{disc} = 150(.15)$$

$$150 - 37.50 = \$112.50$$

disc: X

$$X = 37.50$$

%: 15%

Part B) What is the amount of ^{tax?} tip David ~~should leave?~~

orig: 112.50

$$\text{tax} = 112.50(.04)$$

$$X = 112.50(.04)$$

tax: X

$$X = \$4.50$$

%: 4%

Part C) How much will David have to spend in total?

$$112.50 + 4.50 = \$117$$

Example 3) Beth wants to tip 15% on a restaurant bill that is \$35. She knows that there is a 7.5% sales tax on food. What will be the total bill? $15\% + 7.5\% = 22.5\%$.

orig: 35

$$X = 35(.225)$$

tax/tip: X

$$X = \$7.88$$

$$35 + 7.88 = \$42.88$$

%: 22.5%

Example 4) Zoe took a cab ride that costs \$36. She wanted to give the driver an 18% tip. There is a 5% tax on all rides. How much did the cab ride cost Zoe? $18\% + 5\% = 23\%$.

orig: 36

$$X = 36(.23)$$

tax/tip: X

$$X = \$12.96$$

$$36 + 12.96 = \$48.96$$

%: 23%

5) A home-improvement store sold wind chimes for \$30 each. A customer signed up for a free membership card and received a 5% discount off the price. Sales tax of 5% was applied after the discount. What was the final price of the wind chime?

orig: 30
 disc: X
 %: 5%

~~discount
 $x = 0.05(30)$
 $x = \$1.50$
 $30 - 1.50 = \$28.50$~~

~~Tax
 orig: 28.50
 $x = 28.5(0.05)$
 $x = \$1.43$
 tax: X
 %: 5%
 $28.50 + 1.43$
 $\$29.93$~~

~~Final \$~~

6) Marcus and his little brother went out to lunch. The total of what they ordered is \$26.54, not including tax. The tax rate is 7.75% and Marcus would like to leave a 15% tip. If Marcus had \$40, how much money would he have left? $7.75 + 15 = 22.75\%$

orig: 26.54
 tax/tip: X
 %: 22.75

tax/tip = orig (1.2275)
 $x = 26.54(1.2275)$
 $x = \$32.58$

$40 - 32.58$
 $\$7.42$ left

