

Name \_\_\_\_\_

Date \_\_\_\_\_

Mr. Tallman

**Do Now**

1) Party City is having an After Thanksgiving sale. They are putting all of their Thanksgiving merchandise on sale for 15% off. If a turkey headband originally costs \$8, what is the new price?

Orig: 8

Disc: X

%: 15

$$\text{Disc} = \text{orig}(\%)$$

$$X = 8(.15)$$

$$X = \$1.20$$

$$8 - 1.20 = \$6.80$$

2) A wireless Bluetooth speaker is originally priced at \$135. You find it on sale at Best Buy for \$101.25. What is discount percent?

Orig: 135

Disc: 101.25

%: X

$$\text{Disc} = \text{orig}(\%)$$

$$101.25 = \frac{135(X)}{135}$$

$$X = 0.75 \rightarrow 75\%$$

**Lesson #39 - Multi-Step Percents Day One**

**Fill in the blank with the words "increases" or "decreases".**

- When TAX is applied to an item, the total cost of your purchase increases.
- When a MARKDOWN is applied to an item, the total cost of the item decreases.
- When you leave a TIP, the total amount you are spending increases.
- When an item is DISCOUNTED, the cost of the item decreases.
- When a MARKUP is applied to an item, the total cost of the item increases.

Example 1) You and a few friends go out to dinner. The bill comes to \$84 before tax. The amount of tax is \$7.26 and you would like to leave a \$15 tip. What is the final amount you are paying for dinner?

$$84 + 7.26 + 15 = \$106.26$$

Example 2) Lexie buys a jacket that was originally priced \$150. The store is running a sale 25% off all jackets. She also has a 30% off coupon.

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

orig: 150	disc = orig(.25)	150 - 37.50
disc: X	X = 150(.25)	\$112.50
%: 25	X = \$37.50	

Part B) What is the final cost of the jacket after the coupon?

orig: 112.50	disc = orig(.3)	112.50 - 33.75
disc: X	X = 112.50(.3)	<b>\$78.75</b>
%: 30	X = \$33.75	

Example 3) There's a dance competition this Saturday. Dana would like to buy a new costume which is originally priced at \$95. All costumes are on sale 20% off. There is an 8% sale tax.

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

orig: 95	disc = orig(.2)	95 - 19
disc: X	X = 95(.2)	<b>\$76</b>
%: 20	X = 19	

Part B) What is the final cost of the jacket after the sales tax is applied?

orig: 76	tax = orig(.08)	76 + 6.08
tax: X	X = 76(.08)	<b>\$82.08</b>
%: 8	X = \$6.08	

Example 4) A \$800 television is discounted by 30%. There is a 5% sale tax. Find the final price of the television.

orig: 800	X = 800(.3)	
disc: X	X = 240	
%: 30	800 - 240 = <b>\$560</b>	

orig: 560	tax = orig(.05)	
tax: X	X = 560(.05)	
%: 5	X = 28	
	560 + 28 = <b>\$588</b>	Final price

Example 5) Anthony went out to dinner with 4 of his friends. The bill came to \$85.34. There is a 7.5% tax and they wanted to leave a 18% tip.

Part A) What is the total bill after the tax and tip are applied?

orig: 85.34	<u>Tax</u>	orig: 85.34	<u>Tip</u>
tax: X	tax = orig(.075)	tip: X	tip = orig(.18)
%: 7.5	X = 85.34(.075)	%: 18	X = 85.34(.18)
	X = \$6.40		X = \$15.36
	85.34 + 6.40 = \$91.74		91.74 + 15.36 = <b>\$107.10</b>

Part B) How much money did EACH person pay if they wanted to split the bill evenly?

$$107.10 \div 5 = \text{\$21.42 each}$$

**Now, You Try!**

6) Miguel went shopping and decided to purchase sunglasses for 25% off of the regular price of \$108. He had a coupon for an additional 10% off. How much did Miguel spend on the sunglasses?

orig: 108	<u>Discount</u>	orig: 81	<u>Coupon</u>	disc = orig(.1)	Final Price
disc: X	disc = orig(.25)	disc: X	X = 81(.1)	X = \$8.10	↓
%: 25	X = \$27	%: 10	X = \$8.10	81 - 8.10 = <b>\$72.90</b>	
	108 - 27 = \$81				

7) Lance orders a Blu-Ray from Amazon.com. The Blu-Ray costs \$18. He has a coupon code for a 20% discount and the sales tax is 6%. What is the total cost of his order?

orig: 18	<u>discount</u>	orig: 14.40	<u>tax</u>
disc: X	disc = orig(.20)	tax	tax = orig(.06)
%: 20	X = 18(.20)	disc: X	X = 14.40(.06)
	X = \$3.60	%: 6	X = \$0.86
	18 - 3.60 = \$14.40		14.40 + 0.86
		Total cost	→ <b>\$15.26</b>

8) You are having a pizza party at the local pizzeria. Below is a list of all of the food and drinks needed for the party:

- Eleven pizza pies costing \$7.45 each  $\rightarrow$  \$81.95
- Twenty-two desserts at \$2.95 each  $\rightarrow$  \$64.24
- Nineteen beverages at \$1.75 each.  $\rightarrow$  \$33.25

Total Cost  
\$130.74

The pizzeria offers a 10% party discount. The sales tax is 8.625% and you want to leave a 20% tip. What is the total cost of the pizza party?

Discount		Tax		Tip	
Orig: 130.74	disc = orig(.1)	Orig: 116.93	tax = orig(.08625)	Orig: 130.74	tip = orig(.2)
disc: X	$X = 130.74(.1)$	tax: X	$X = 116.93(.08625)$	tip: X	$X = 130.74(.2)$
%: 10	$130 - 13.07 = \underline{\$116.93}$	%: 8.625	$X = \underline{\$10.09}$	%: 20	$X = \underline{26.14}$
				116.93 + 10.09 + 26.14	
				<u>\$153.16</u> Total Cost	

9) Meg and Julia went to lunch and received the following bill.

Part A) They realize after they receive the bill they have a 35% off coupon. Calculate the new bill after the 35% off coupon is applied. Remember to recalculate the tax after the coupon is applied.

Piccolo Restaurant	
Bellmore, NY	
12/10/2016 12:45	
1 TriClr Tortellini	\$10.95
1 Chicken Francese	\$13.95
2 @\$1 House Salads	\$2.00
Items	\$26.90
Tax	\$2.32
<b>TOTAL</b>	<b>\$29.22</b>

Discount		Tax	
Orig: 26.90	$X = 26.90(.35)$	Orig: 17.48	tax = orig(.08625)
disc: X	$X = \$9.42$	tax: X	$X = 17.48(.08625)$
%: 35	$26.90 - 9.42 = \underline{\$17.48}$	%: 8.625	$X = \underline{\$1.51}$
		$17.48 + 1.51 = \underline{\$18.99}$	

Part B) If Meg and Julia only have \$14 each to spend, will they have enough to cover the bill?

Yes!