

Write your
questions here!



GN 5.3 –Percent Increase & Decrease Equations

Finding Discounts and Markups

Example 1a: Find 20% **discount** on a \$38.50 shirt at Aeropostale.



Long Way (Scenic Route)



Steps:

Shortcut Method:

If you are not receiving a discount;
what percent are you paying for?

If you are NOT paying for
20% of the price; what
price ARE you paying for?

Finding Tax

How much is the total if you pay an 8% tax on a \$85.32 bill?



Method 1:

- 1.) Find 8% of \$85.32
- 2.) ADD the tax to the amount.
- 3.) Round to nearest cent:

Method 2:

- 1.) Find 108% of \$85.32
- 2.) Round to nearest cent:



Why did we use 108%??



Now,
summarize
your notes
here!

5.3 PRACTICE PROBLEMS

1. MATCHING

Match the term to the example:	
___ 1) Even though I bought \$10 worth of pencils; I had to pay \$10.88.	a) Sales Tax
___ 2) Kent carried my bags up to my hotel room so I gave him \$5.	b) Tip
___ 3) Joyce bought a sequin top for 20% off.	c) Commission
___ 4) Tommy made \$340 plus his salary because he rented out a lot of apartments this week.	d) Discount
___ 5) Porsche ordered three pairs of shoes for \$20 each and was charged \$65.25.	

Solve the following Mark Up and Discount Problems

2. Suzy just bought the new laptop. It was \$459 plus 8% sales tax. How much was her total purchase?
There are two ways to solve this problem

Method 1:

Find out what is 8% of \$459

_____ = _____

Then add it to the original

Item price + *Tax* = *Grand total*

_____ + _____ =



Method 2:

The price of the item is 100%

AND tax is 8%

100% + 8% = 108%

So,

Original (% Owed/Required) = Result

3. Sales tax in Michigan is 6%. What would the price of a \$35 shirt be after sales tax?

Equation: _____

4. Sears is selling table for \$140. If this price represents the new price after a 25% markup, what was the original price before the mark-up?

Equation: _____

5. If you get a 20% employee discount on a pair of boots that cost \$145, how much would the sales price be?
(Assume there is no sales tax)

Equation: _____

6. You bought a dress for 35% off. If the sale price was \$85, what was the original price of the dress?

Equation: _____

7. A patient requires a 30% decrease in the dosage of his medication. His current dosage is 340 mg. What will his dosage be after the decrease?

Equation: _____

8. Manuel found a wrecked Trans-Am that he could fix. He bought the car for 65% of the original price of \$7200. What did he pay for the car? (Round to nearest dollar)

Equation: _____

<p>9. Pamela bought an electric drill at 85% of the regular price. She paid \$32.89 for the drill. What was the regular price? (Round to the nearest cent)</p> <p>Equation: _____</p>	<p>10. If your cell phone bill was \$67.82 and there is a 7.5% late fee, how much will your bill be?</p> <p>Equation: _____</p>
<p>11. In a bicycle store, a \$500 bicycle is marked, "Get a 25% discount." What is the sale price of the bicycle?</p> <p>Equation: _____</p>	<p>12. The price of a new car is \$29,990. If the sales tax rate is 6.5%, then how much sales tax is being charged? What is the total cost for the car after tax?</p> <p>Equation: _____</p>
<p>13. Maria paid \$28.00 for a jacket that was discounted by 30%. What was the original price of the jacket?</p> <p>Equation: _____</p>	<p>14. Sugar-free gum contains 40% less calories than regular gum. If a piece of regular gum contains 40 calories, how many calories does a piece of sugar-free gum contain?</p> <p>Equation: _____</p>

15. If your cell phone bill was \$67.82 and there is a 7.5% late fee, how much will your bill be?

Equation: _____

16. You buy a pair of jeans that is 33% off the original price of \$29. What is the sale price?

Equation: _____

17.

Skateboards A store that sells skateboards buys them from a manufacturer at a wholesale price of \$57. The store's markup is 150%. What is the retail price?

Equation: _____

18. Rick bought 3 shirts for \$18 each, 2 pair of socks for \$3.99 a pair, and a pair of slacks for \$45.00. The sales tax rate is 8.5%. How much did he pay?

Equation: _____

19.

Jackets You have \$50 to spend at a clothing store. You find a jacket that is on sale for 15% off the original price. If the original price of the jacket is \$60 and there is no sales tax, do you have enough money to buy the jacket? Explain.

Equation: _____

Challenge A sign says that the price marked on all music equipment is 30% off the original price. You buy a drum set for the sale price of \$315. What is the original price?

20.

Equation: _____

Explain If you know the sales tax amount and the total cost of an item, explain how you can find the original price of the item.

21.

Equation: _____

22. MULTIPLE CHOICE: In order for a school to allow a vending machine to be placed next to the cafeteria, 65% of the school's population must ask for it. If 340 of the school's 650 students have requested the vending machines, how many more are needed to get the vending machines?

- A. 75
- B. 83
- C. 89
- D. 99

Example 23: Photographer Double Check

Part 1: Read the introduction from Mrs, Urquhart below.

Mrs. Urquhart, “I needed a photographer for my wedding and I only budgeted \$1700 for this service. After meeting with a wedding photographer I liked, she recommend I go with the 8 hour package opposed to the 6 hour package. I told her about my price limit and she showed me the package options, which read:

6 hour - \$1450	8 hour - \$1750	10 hour - \$2050
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I decided to splurge and go with the 8-hour package. She the told me in order to book her I needed to put down 30% of the total bill and I said that would be fine.”

Part 2: Approximate how much money 30% down of the total bill should be after sales tax?

Part 3: The next day I received the following invoice.

What does this bill represent? Does it appear accurate? Why or why not?



Powered by **PayPal**

You've received an invoice

Hello Molly Urquhart,

Captured Couture, LLC sent you an invoice for \$658.26 USD.

[View and Pay Invoice](#)



Part 4: Given the invoice, how much should the total bill come out to?

(Don't forget to include 6% Sales tax) How much more will Ms. Urquhart have to pay her photographer before her wedding day?

Part 5: What is the next step/action you should take to check the photographer off your to-do list?