REBATES AND TAXES

Vocabulary

Discount: The difference between the sale price and the regular price of the item.

Markup: The difference of the wholesale cost and the retail price of the item.

Sales Tax: The tax on the item paid to the government.

Commission: Is money paid to a person who sells something.

Simple Interest: A fixed percent of the principal.

Taxes

A 15% sales tax means that we pay an extra 15 cents for every $1 (100 cents) we spend.

Example

You want to buy a sweater that costs $40. Sales tax in the province is 15%. How much tax will you pay and what is the total cost of your sweater?

Method 1

Multiply the cost of the sweater by the percent to find the tax

Step 1: Change 15% to a decimal   15% = 0.15

Step 2: Multiply 0.15 and 40   40 x 0.15 = 6

You will pay $6 in taxes.

To find the total cost add the taxes to the subtotal $6 + $40 = $46.

Method 2

Set up a proportion and solve to find the tax.

Step 1: $15\% = \frac{15}{100}$

Step 2: Set up your tax equal to the proportional ratio with the unknown quantity

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

Step 3: Cross multiply to solve $\frac{(15) \times 40}{100}$ so the tax would be $6

The total cost is $6 +$40 = $46

Finding the Original Price
You can also find the original price if you know the final price and the percent of tax.

Example
You bought new headphones. The receipt says that the total cost of the headphones is $53.99 including an 8% sales tax. What was the original price of the headphones without the taxes?

Step 1: Add the percent of the cost of the headphones and the percent of the tax to get the total cost percent.

100% + 8% = 108 % (You paid the full price 100% of the headphones and the 8% tax)

Step 2: Convert the percent to a decimal 108% = 1.08

Step 3: Solve for the original price

Original cost = $\frac{Price\ Paid}{Percent\ Paid}$ $= \frac{53.99}{1.08}$ so the original cost is $49.99

Discounts
Words and phrases that mean you will save money (and that you will subtract the discount form the original price) are savings, price reduction, markdown, sale, clearance.

Calculating a discount is like calculating tax, but because you are saving money, you subtract it from the original price.

Example
A new hat costs $12.50. A sign in the window at the store says that is it is 20% off. What is the discount off of the hat, and what is the new price of the hat?

Method 1
Find out the value of the discount and subtract it from the original price.

Step 1: Change the percent discount to a decimal. 20 % = 0.20

Step 2: Multiply the decimal by the original amount to get the discount.
        0.2 x $12.50 = $2.50

Step 3: Subtract the discount from the original price $12.50 -$2.50 = $10

The new price of the hat is $10.00

Finding the Original Price
You can also find the original price if you know the final price and the discount.

Example
A video game is on sale for 30% off of the regular price. If the sale price is $41.99, what was the original price?

Step 1: Subtract the percent of the discount from the percent of the original cost:
100% - 30% = 70% (you only paid 70% of the original price)

Step 2: Convert the percent to a decimal 70% = 0.70

Step 3:
Original cost $= \frac{Price\ Paid}{Percent\ Paid}$ $\qquad\qquad \frac{41.99}{0.7} = \$59.99$

The original price of the video game was $59.99.

Finding the Percent Discount
You can find the percent discount if you know the final price and the original price

Example

Julie paid $35 for a shirt that is on sale. The original price was $50. What was the percent discount.

$\frac{35}{50}$= 0.3 x 100 = 30% off

The discount was 30% off of the original price.