



MasterMath

NUMBER SENSE

Discounts, Markups, and Simple Interest

Discounts

A percentage reduction in the price of something.



Markups

A percentage added to the wholesale cost of something.



SIMPLE INTEREST

A percentage paid to the depositor for use of their money. The amount deposited is the Principal.



Discounts, Markups, and Simple Interest



Discounts

A percentage reduction in the price of something.

$a = p * w$

The sweater was normally \$50, but today it is discounted 25%


$a = .25 * \$50 = \12.50
 $\$50.00 - \$12.50 = \$37.50$
 $R = .75 * \$50 = \37.50


25%	25%	25%	25%
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The sweater was normally \$50, but today I paid only \$37.50. What discount did I receive?

$\$37.50 = p * \50
 $\$37.50 \div \$50 = p$
 $.75 = p$
 $1.00 - .75 = .25 = 25\%$

Discounts, Markups, and Simple Interest





Markups

A percentage added to the wholesale cost of something.


$$a = p * w$$

Carol's Cars pays the manufacturer \$15,000 for a car, then marks it up 33.3% for sale to the public
 $a = .333 * \$15,000 = \$5,000$

Carol's Cars pays the manufacturer \$15,000 for a car, then sells them to the public for \$20,000.
 $\$5,000 = p * \$15,000$
 $5 \div 15 = .333$

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SIMPLE INTEREST



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$$a = p * w$$

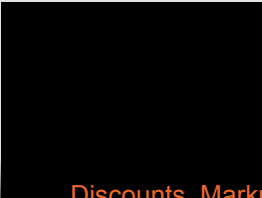
Your principal at the Bank of Bob is \$1000 today. BofB pays 5% interest. How much principal will you have in one year?
 $a = .05 * \$1000 = \50
 $\$1000 + \$50 = \$1050$

Your principal at the Bank of Bob is \$1000 today. BofB pays 5% interest. How much principal will you have in five years?
 $a = .05 * 5 * \$1000 = \250
 $\$1000 + \$250 = \$1250$

Discounts, Markups, and Simple Interest

You try it!

Sammy's Sofas bought a sofa from the manufacturer for \$800, and then marked it up 15%. After 6 months, it hadn't sold, so Sammy discounted the sofa 10%. What was the new sales price of the sofa?



Discounts, Markups, and Simple Interest

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$$a = p \cdot w$$

$$a = .15 \cdot \$800 = \$120$$

$$R = \$800 + \$120 = \$920$$

$$R = 1.15 \times \$800 = \$920$$

$$a = p \cdot w$$

$$a = .10 \cdot \$920 = \$92$$

$$R = \$920 - \$92 = \$828$$

$$R = (1.0 - 0.1) \cdot \$920 = \$828$$

Discounts, Markups, and Simple Interest

You try it!

You deposit \$500 into a savings account earning 4% interest. You leave the money in the account for 6 months. What is your principal balance when you withdraw the money after 6 months?

Discounts, Markups, and Simple Interest

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$$a = p \cdot w$$

$$a = .04 \cdot \frac{1}{2} \cdot \$500$$

$$a = .02 \cdot \$500 = \$10$$

$$\$500 + \$10 = \$510$$

Discounts, Markups, and Simple Interest
