

# Applications of Percent

Practice

**Estimating with Percent**

**Percent Equations**

**Discounts**

**Simple Interest**

**Commission**

**Percent Change**

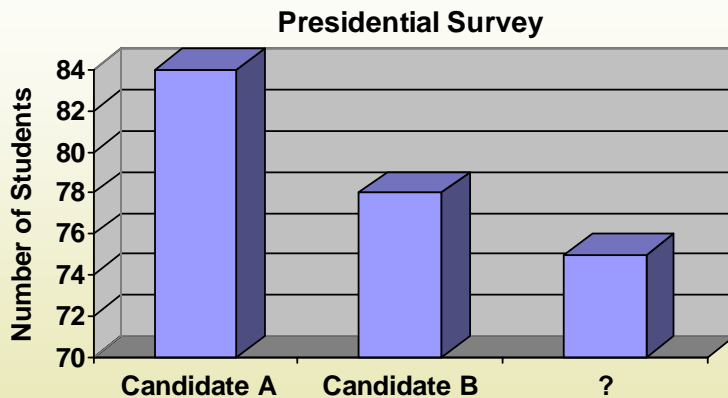
**Sales Tax**

## Estimating with Percent

Problem #1: Estimate 35% of 289.

Problem #2: Estimate 64% of 893.

Problem #3: The graph below shows the results of a recent survey in which high school students were asked who they favored in the upcoming presidential election. About what percent of the students were undecided? State the letter of the correct estimate.



- a. 37%   b. 25%   c. 50%   d. 32%



## Percent Equations

A general equation that is used for percent equations is  $P = R \cdot B$ .

$P$  represents **P**ercentage      $R$  represents **R**ate      $B$  represents **B**ase.

**Problem #4: Find 48% of 260 .**

**Problem #5: 125 is 20% of what number?**

**Problem #6: 75 is what percent of 250?**

## Discounts

Problem #7: A computer on sale is marked 25% off. What is the amount of discount and sale price of the computer?



## Discounts

Problem #8: Brooke went shopping with her friend Emily to find a dress for the homecoming dance. She chose a dress that was marked **25% off**. The original price of the dress was approximately \$60. Brooke told Emily that the sale price of the dress would be approximately \$45. Was she correct?

- a. yes
- b. no

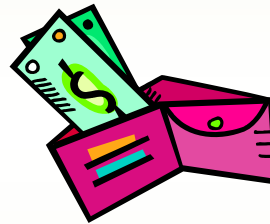


## Simple Interest

The simple interest formula is  $I = p r t$ , where  $I$  represents *interest*,  $p$  represents *principal*,  $r$  represents *rate*, and  $t$  represents *time*.

Problem #9: Find the simple interest. Round the answer to the nearest cent.

\$537 at 6.25% for 1 1/2 years



## Commission

Problem #10: Jean, a sales associate, is paid on a commission based on total sales per day. She receives a 3% commission of her total sales for selling five items or less. She receives a 4.5% commission if she sells more than five items. On Tuesday, Jean sold three items that totaled \$2,345. What was her commission?



## Percent Change

**Percent of change** is the ratio of the **amount of change** to **the original amount**.  $\text{Percent Change} = \frac{\text{Amount of Change}}{\text{Original Amount}}$

### Percent of Increase

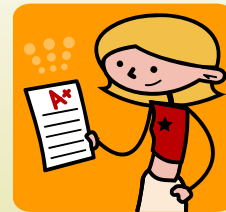
Problem #11: A college graduate earned \$34,000 for his first job. Currently, he has a salary of 53,600. His current salary reflects what percent of increase over his first job? Round the answer to the nearest percent.



*Multiply by 100 to express your answer in percent.*

### Percent of Decrease

Problem #12: The 9<sup>th</sup> grade math teacher decided to reduce the number of bonus points on the semester exam so the students would have ample time to finish the exam. The original exam had 25 bonus points. The new exam now has 15. Find the percent of decrease in bonus points.



*Multiply by 100 to express your answer in percent.*



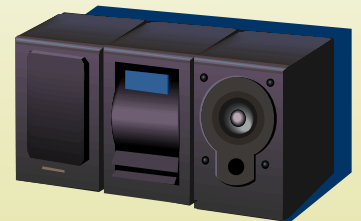
## Sales Tax

John is purchasing a mini stereo system that is on sale for  $33\frac{1}{3}\%$  off the regular price of \$229.95.

Problem #13: What is John's discount and sale price?

Problem #14: After the price reduction, a 7.5% sales tax is added. Determine the sales tax and final cost for John's mini stereo system. Round the answer to the nearest cent.

*\*The purchase price is the sale price determined in Problem #12.*



## Answers

Problem #1: 105

Problem #2: 600

Problem #3: Choice "d".

Problem #4: 124.8

Problem #5: 625

Problem #6: 30%

Problem #7: discount: \$262.25; sale price: \$786.75

Problem #8: Choice "a".

Problem #9: \$50.34

Problem #10: \$70.35

Problem #11: 58%

Problem #12: 40%

Problem #13: discount: \$76.65; sale price: \$153.30

Problem #14: sales tax: \$11.50; sale price: \$164.80

