

**Algebra I**  
**Lesson 2.9 – Applications of Percents**  
**Mrs. Snow, Instructor**

Who uses percents? You do to calculate your grades! Business use percents to calculate profits; employees have taxes on their salary; savings accounts at banks have interest income, and so on.

**Vocabulary:**

**Commission** - money paid to a person or a company for making a sale. Generally commission is a percent of the sale amount.

**Interest** – is the amount of money charged for borrowing money or the amount of money earned when saving or loaning money.

**Principal** – the initial amount of money borrowed or invested.

**Simple interest** – interest paid only on the principal.  $I = Prt$  where  $I = \text{simple interest}$ ,  $P = \text{principal}$ ,  $r = \text{interest rate}$ ,  $t = \text{time}$

**Tip** - is the amount of money added to bill for service; it is usually calculated before taxes.

**Tax** - is a percent of an item's cost.

Find the simple interest rate paid annually for 3 years on a \$1200 loan at 14%.

Find the simple interest rate paid annually for 3 years on a \$1200 loan at 6%.

What is the simple interest rate after 2 years on an investment of \$3000 at 4.5% interest earned annually?

What is the amount of tip on a restaurant bill of \$21.98 if the tip is 15%?

The sales tax rate is 8.25%. What is the sales tax on a \$32.00 shirt?