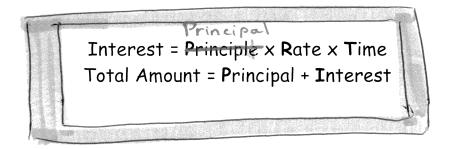# Simple Interest _Key_

Interest is either what you pay the bank for borrowing money or what the bank pays you for investing money. The formula for simple interest is below. The **P**rincipal is the amount of money that is invested or borrowed. The interest **R**ate is the percent charged or earned and is written as a decimal. **T**ime is listed in the amount of years.

> *Principal*
> Interest = ~~Principle~~ x **R**ate x **T**ime
> Total Amount = **P**rincipal + **I**nterest

Let's try some examples…

1. Morgan has $700 in her savings account. If the bank pays 5% interest, how much money will Morgan have in her account twenty years from now?

$$I = PRT$$
$$I = (700)(.05)(20)$$
$$I = 700$$

$$TA = P + I$$
$$TA = 700 + 700$$

The TA will be $1400.

2. Mr. Ito took out a 6-month loan of $1500 at an 8% yearly interest rate. How much must Mr. Ito repay at the end of the 6 months?

$$I = PRT$$
$$I = (1500)(.08)(.5)$$
$$I = 60$$

$$TA = P + I$$
$$TA = 1500 + 60$$
$$TA = 1560$$

Mr. Ito will have to repay $1560

3. Ian deposits $900 in a savings certificate that pays $6\frac{1}{2}\%$ annually. How much will Ian have at the end of one year?

$$I = PRT$$
$$I = (900)(.065)(1)$$
$$I = 58.50$$

$$TA = P + I$$
$$TA = 900 + 58.50$$
$$TA = \$958.50$$

Ian will have $958.50 at the end of one year!

4. Doreen invested $1200 at 7% for three years. What will Doreen's investment be worth at the end of the 3 years?

$$I = PRT$$
$$I = (1200)(.07)(3)$$
$$I = 252$$

$$TA = P + I$$
$$TA = 1200 + 252$$
$$TA = \$1452$$

Doreen's investment will be worth $1452