Simple Interest

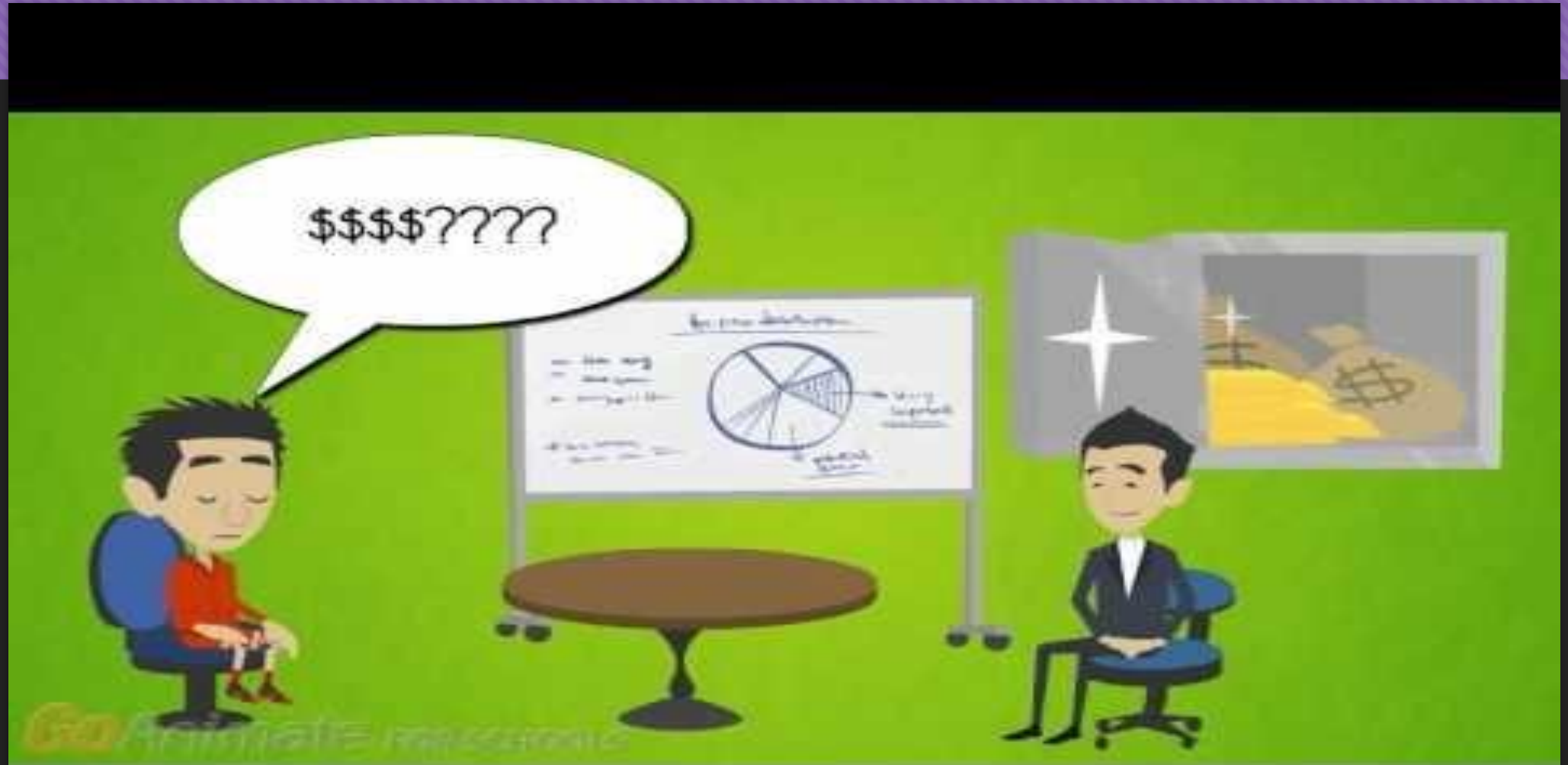# Simple Interest

- The interest is either the amount that you pay in exchange for borrowing money or the amount that you earn by allowing a portion to be invested

- Simple interest is interest that is only calculated on the original amount borrowed or invested

- We call the borrowed/invested amount the principal

Simple Interest

- When we calculate simple interest, we look at years or parts of a year

- Remember 1 year = 12 months = 365 days

- Simple interest rates are usually written as a percentage per year

- Interest rates are the percent of the principal that is paid or earned as interest

Simple Interest

Simple Interest

- To calculate simple interest, we use the formula
  - $I = Prt$
- I stands for interest
- P stands for principal
- R stands for interest rate per year
- T stands for time in years

Simple Interest

○ Sarah is saving for a new motorcycle helmet

   ○ She has saved $600 and will invest it for six months

   ○ The interest rate for her investment is 1.5% per year

○ How much interest will Sarah earn on her investment?

○ $I = Prt$

○ I = 600 x 1.5% x $\frac{6}{12}$ = $4.5

Simple Interest

- Sue is planning a trip to the United States
- She has invested $5000 with an annual interest rate of 0.5%
- If Sue withdraws her money after 120 days, how much interest will she earn?
- $I = Prt$
- I = 5000 x 0.5% x $\frac{120}{365}$ = $8.23

Simple Interest

- It is important to consider the total value of the loan or investment after the time period has finished

- This the total amount

- You find this by adding the principal and the interest

Simple Interest

○ Using what we calculated with our previous examples

○ How much money will Sarah have after her investment period is over?

○ A = P + I

○ A = $600 + $4.5

○ Sarah will have $604.5

Simple Interest

- How much money will Sue have for her trip?
- A = P + I
- A = $5000 + $8.23
- Sue will have $5008.23 for her trip