

## Problem Solving with Compound Interest

1. You have decided to start saving for a car. You decide to deposit \$400 at the end of each month into an account that pays 3.6% per year, compounded monthly. How much money will you have saved, in total, after 6 months?

2. You want to make sure that you have money available for "fun" while you are away at college. How much do you need to invest before you go to school, in an account that earns 3.5% interest compounded monthly, to be able to withdraw \$200 per month for 8 months?

Assume that you will withdraw the money at the end of each month, and that you will deposit all of the money one month before the initial withdraw.

# Annuities

An annuity is a series of \_\_\_\_\_ (or \_\_\_\_\_)  
made at \_\_\_\_\_ time intervals.

The future value of an annuity tells us the total amount accumulated over time.

The present value of an annuity is an \_\_\_\_\_ amount that generates a series of \_\_\_\_\_, or a \_\_\_\_\_ amount that requires a series of future \_\_\_\_\_.

## Example: Saving for Retirement

You have decided that it's time to start saving for retirement.

You want to have \$\_\_\_\_\_ when you retire.

You want to retire when you are \_\_\_\_\_.

Assume that you are going to invest your money in an account that earns 7% interest per year compounded annually.

**How much money do you need to put away each month to reach your goal?**



