Time value of money

We invest $100 at 5%.

- 1 year
- 2 years
- 3 years
- 97 years

Exponents to the rescue

A=P(1+r)^n

A = final amount
P = initial principal amount
r = rate of return
n = number of periods

Can we go in reverse?

How much would you have to invest today at 5% to have $10,000 in 6 years?

a) use the formula

b) use a spreadsheet

c) check our answer

Regular deposits

If we contribute $100 every year at 5% how long will it take for us to have $1,000 to throw a big party.

Consider the fact that inflation drives party costs up by 3% every year.

Exercise:

1) $200 invested at 4% for 5 years will be worth how much?
2) How much would you have to invest today at 6% to have $10,000 in 6 years
3) How much would you have to invest today at 5% to have $10,000 in 6 years
4) If you deposit $100 every year to an account that earns 8%, how much will you have in 20 years?
5) How much money would you need to have in an account today if you plan to take out $1,000 every year for 10 years. The account earns 7%. You will make no other contributions. (you may need trial and error on a spread sheet)

Complete the Canvas quiz to record your answers.