

INTEREST

How does interest impact finances?

What is interest?

The cost of borrowing money, expressed as an annual percent.

(right now $\approx 3\%$)

Why does interest exist?

- gives incentive to loan money

↳ individuals

↳ small business

- minimizes risk level of loans

What is compound interest?

How can we calculate interest?

If \$0.93 is in the bank at 2.25% for 1000 years how much is it worth?

$$0.93(0.0225) = 0.0209 = 0.02$$

$$0.95(0.0225) = \text{too long}$$

$$0.93(1.0225) = 0.95$$

$$0.93(1.0225)^{1000} = 4.28 \text{ billion}$$

After 100 years

Exponential growth

$$0.93(1.0225)^{100} = 8.60$$

Interest rates are annual but are rarely charged at end of year. Most common

rate is monthly. This called compound interest.

If \$5000 is used on a credit card, at 18.5% interest compounded monthly. If nothing is paid back for two years, how much will be owed?

In general,

Minimum payments

Credit card companies require borrowers to make minimum payments. Why would they do this?