

Engineering Economy

Chapter 4: The Time Value of Money

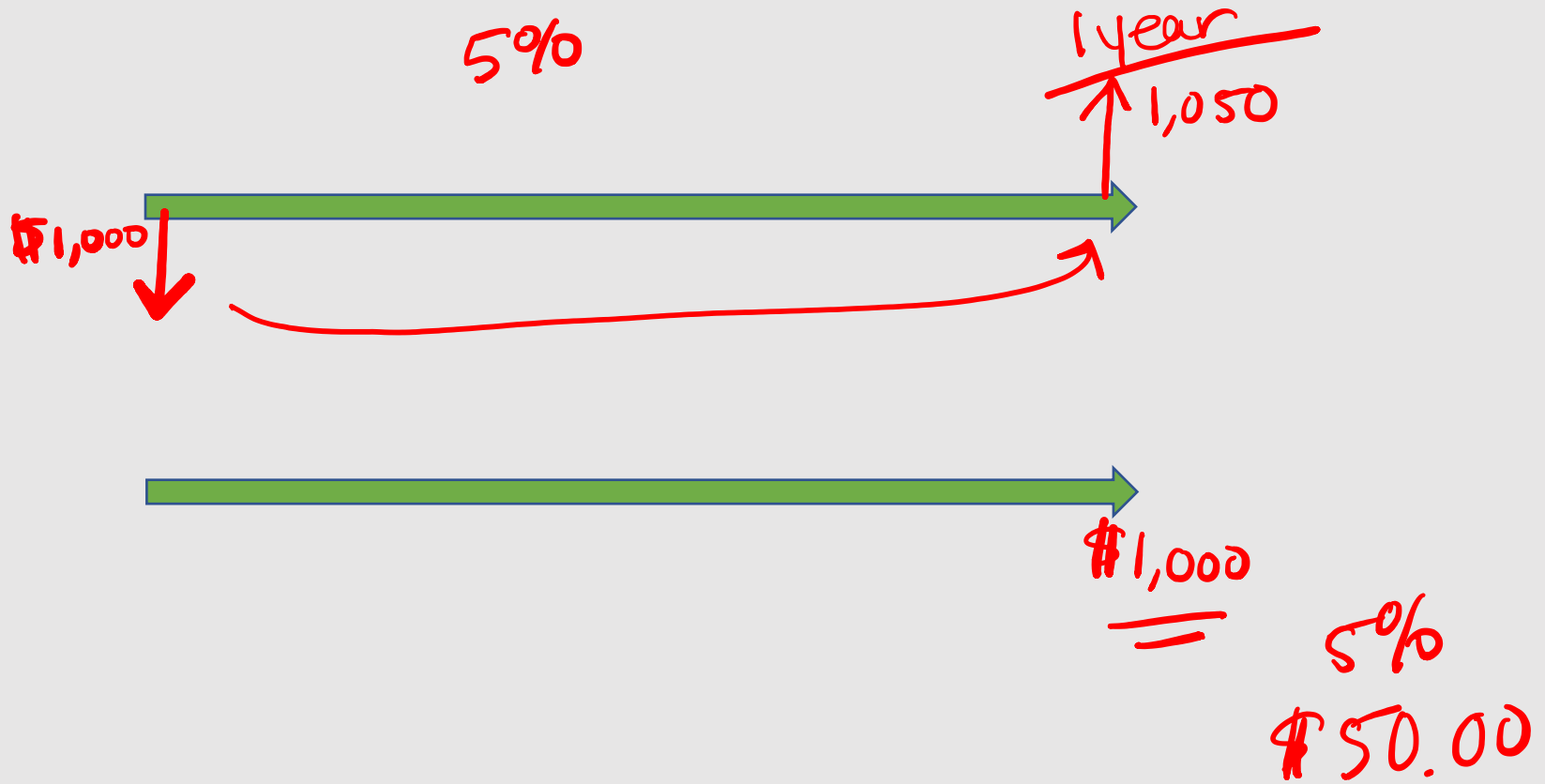
Christy Bozic, PhD

Money has a time value.

A dollar today is worth more than a dollar in the future.
It can be invested and earn interest.



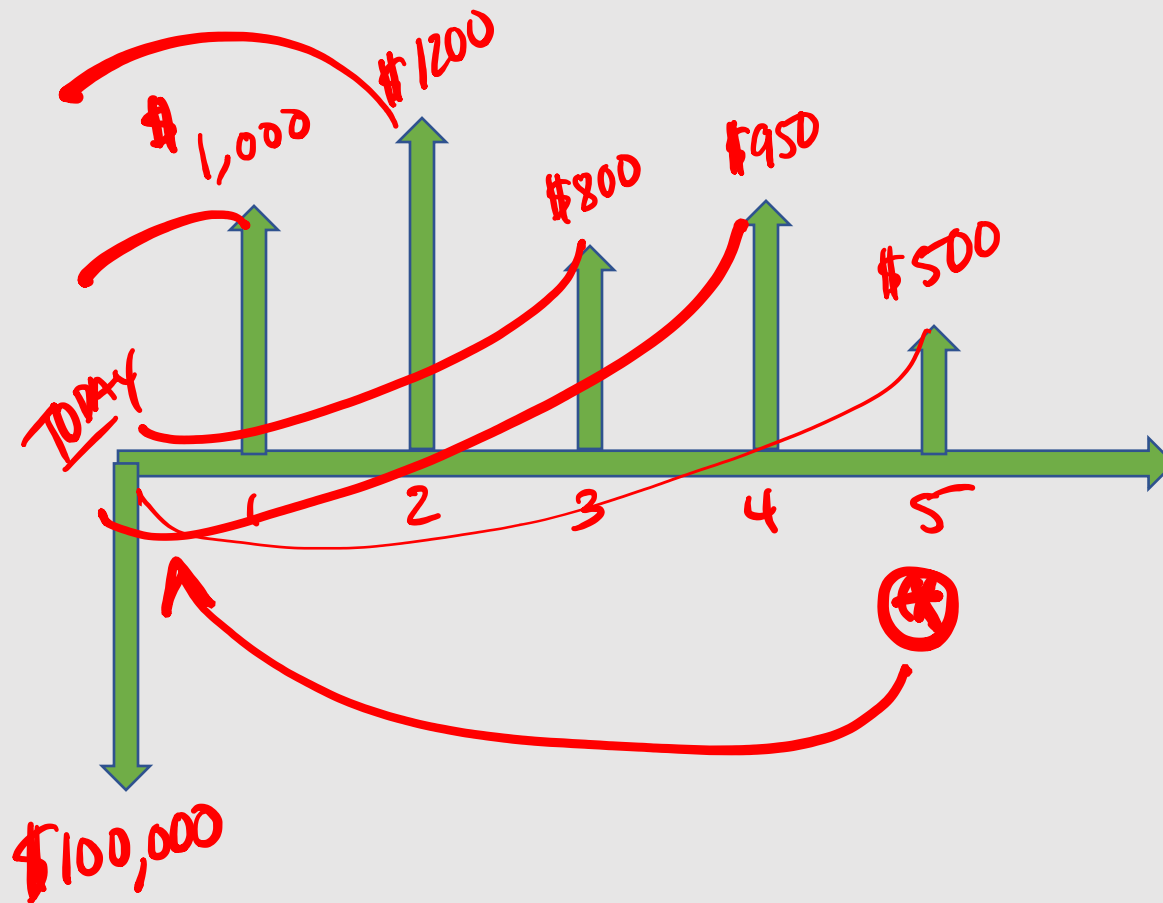
\$1,000 Today or Next Year?



Capital Expenses



Discounted Cash Flows



Return of capital in the form of interest and profit is an essential ingredient of engineering economy studies.

- Interest and profit pay the providers of capital for forgoing its use during the time the capital is being used.
- Interest and profit are payments for the *risk* the investor takes in letting another use his or her capital.
- Any project or venture must provide a sufficient return to be financially attractive to the suppliers of money or property.