

Assignment 9: Engineering Economy

100 Points (Due: 8:25AM Tuesday Nov. 29)

Show your work and explain what you are doing. No round down or up, use 2 decimals for dollar values and 4 decimals for factors

PROBLEM 1

You invest \$10,000 now in a project that pays back your money plus the interest.

1. How long would you have to wait to double your money if interest rate were 20% simple?
2. How long would you have to wait to double your money if interest rate were 20% compounded annually?
3. What should the simple interest rate be for you to double your money in 20 years?
4. What should the compounded annually interest rate be for you to double your money in 20 years?

PROBLEM 2

You have decided to invest \$2,xxx (xxx is the last three digits of you Student ID) at the end of each year for the next several years in an investment that pays 15% interest rate compounded annually.

1. How much would you receive after 20 years?
2. What is the present worth of the investment now?
3. How many years do you have keep paying before the present worth of your investment is close to \$20,000?
4. What should the interest rate be for your investment to have a present value of \$20,000 after 10 years?