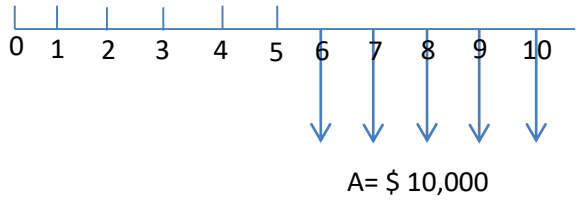
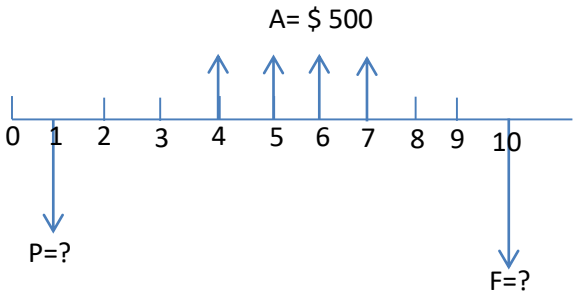
First Tutorial

1- Find a) the present value in year 5 b) the future value in year 10 c) the present value in the time 0 for the following cash flow (*i* = %10).



a) P = A (P/A, *i*%, n) = 10,000 (P/A, 10%, 5) = 10,000 * 3.7908 = $ 37,908
b) F = A (F/A, *i*%, n) = 10,000 (F/A, 10%, 5) = 10,000 * 6.1051= $ 61,051
c) P = F (P/F, *i*%, n) = 37,908 (P/F, 10%, 5) = 37,908 * 0.6209 = $ 23,537

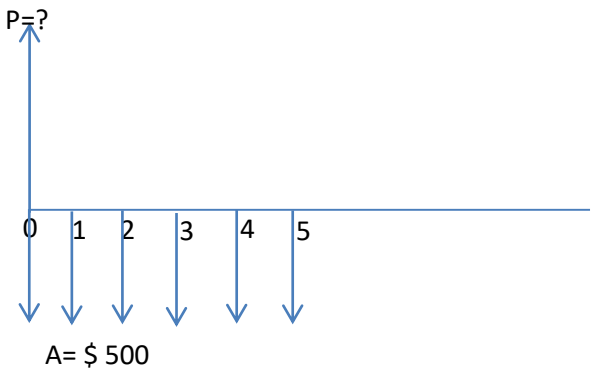
2- Find PV in year 1 and FV in year 10 for the following cash flow (*i*= %8).



P = 500 (P/A, 8%, 4) (P/F, 8%, 2) = $ 1,419.73

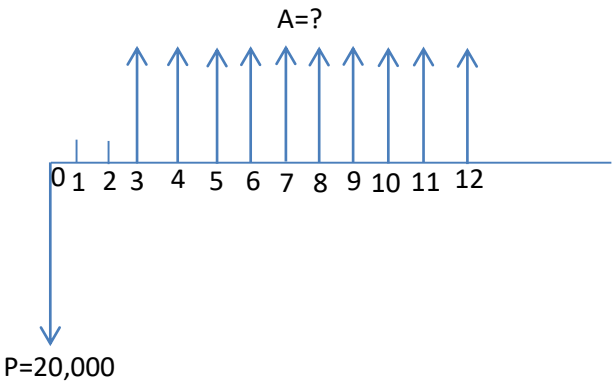
F = 500 (F/A, 8%, 4) (F/P, 8%, 3) = $ 2,838.17

3- What is the present value of the following cash flow? (*i*= %8)



P = 500 + 500 (P/A, 8%, 5) = $ 2,496.35

4- Suppose $20,000 is deposited into an account that pays interest at a rate of %7 per year. If 10 equal annual withdrawals are made from the account, with the first withdrawal occurring three years after the deposit, how much can be withdrawn each year in order deplete the fund with the last withdrawal?



Present worth of the uniform-series amounts = A (P/A, 7%, 10) (P/F, 7%, 2)

Then, 20,000 = A (P/A, 7%, 10) (P/F, 7%, 2) = A * 7.0236 * 0.8734

A = $3,260.29