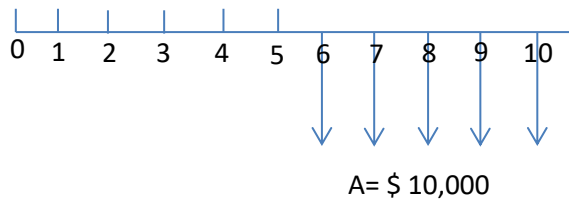


Second tutorial

1- Find the present value in year “5”, in year “0” and the future value in year “10” for the following cash flow (i= %10).

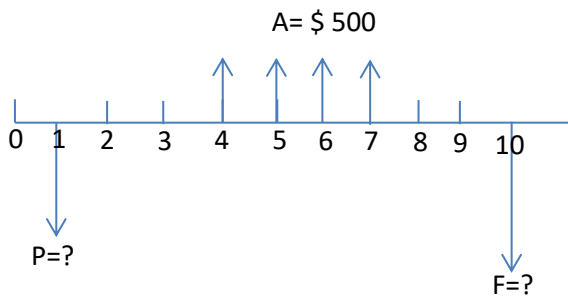


$$P_{(5)} = A (P/A, i\%, n) = 10,000(P/A, 10\%, 5) = 10,000 * 3.7908 = \$ 37,908$$

$$P_{(0)} = 37,908 (P/A, 10\%, 5) = \$ 23,537$$

$$F_{(10)} = A (F/A, i\%, n) = 10,000(F/A, 10\%, 5) = 10,000 * 6.1051 = \$ 61,051$$

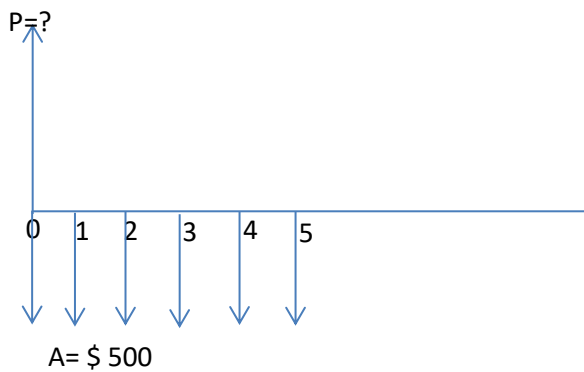
2- Find the present value in year 1 and the future value in year 10 for the following cash flow (i= %8).



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

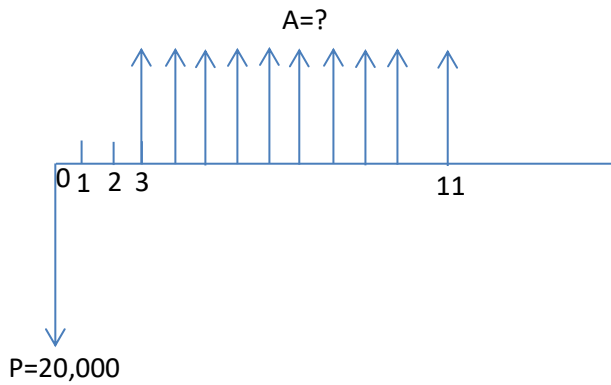
$$F = 500(F/A, 8\%, 4) (F/P, 8\%, 3) = \$ 2,838.17$$

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



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

5- 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10 equal annual withdrawals are made from the account, with the first withdrawal occurring in year 3, how much can be withdrawn each year in order to deplete the fund with the last withdrawal?



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

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

$$A = 3,260.29$$