**IE 260 CLASS EXERCISES - WEEK 5**

1. You borrow 10,000 TL at 10% interest rate for 3 years from your local bank. The bank proposes you 3 different payment plans:

Scheme A: At the end of each year you only pay the interest due. At the end of the 3rd year you pay the principal together with the interest

Scheme B: You pay all interest and principal at the end of the 3rd year (you do not pay anything in between)

Scheme C: You make equal payments at the end of each year

* 1. For each scheme draw their cash flow diagram.
  2. For each scheme calculate the accrued interest, principal and interest payments. You can use the following table.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Period** | **Amount owed at the beginning of period (TL)** | **Interest accrued for the period (TL)** | **Total owed at the end of period (TL)** | **Interest payment (TL)** | **Principal Payment (TL)** | **Total EOY payment (TL)** |
| 1 |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |
| 3 |  |  |  |  |  |  |

1. Suppose you want to have $0.5 million saved by the time you reach age 30 and suppose that you are 20 years old today. If you can earn 5% on your funds, how much would you have to invest toda to reach your goal?
2. You invest $10,000 at the end of each year for 5 years where *i* = 8%. Draw the cash flow diagram and find the value of the account at EOY 5.