Complete these questions to complete our first day on LAB 3

**5.** Calculate the future value of each annuity.

K

| | Regular Payment | Rate of Compound Interest per Year | Compounding Period | Time |
|---|---|---|---|---|
| **a)** | $1500 per year | 6.3% | annually | 10 years |
| **b)** | $250 every 6 months | 3.6% | semi-annually | 3 years |
| **c)** | $2400 per quarter | 4.8% | quarterly | 7 years |
| **d)** | $25 per month | 8% | monthly | 35 years |

**6.** Mike wants to invest money every month for 40 years. He would like to have $1 000 000 at the end of the 40 years. For each investment option, how much does he need to invest each month?

A

**a)** 10.2%/a compounded monthly

**b)** 5.1%/a compounded monthly

**2.** Each situation represents a simple, ordinary annuity.

**i)** Calculate the present value of each payment.

**ii)** Write the present values of the payments as a series.

**iii)** Calculate the present value of the annuity.

| | Regular Payment | Rate of Compound Interest per Year | Compounding Period | Time |
|---|---|---|---|---|
| **a)** | $8000 per year | 9% | annually | 7 years |
| **b)** | $300 every 6 months | 8% | semi-annually | 3.5 years |
| **c)** | $750 per quarter | 8% | quarterly | 2 years |