

GROUP TUTORIAL 5: ANNUITY (MAT112)

- 1) Table below shows the monthly deposits that were made into an investment account that pays 12% compounded monthly. Find the value of this investment at the end of 2012. (8 marks)

| Year | Monthly deposit |
|------|-----------------|
| 2013 | RM100 |
| 2014 | RM200 |
| 2015 | RM300 |

- 2) Razif borrowed RM70,000 from a bank for 5 years at 6% compounded monthly
- Find the monthly payment (3 marks)
 - If he has not paid his first 3 monthly payments, how much should he pay on the 4th payment to settle all the outstanding arrears? (3 marks)
 - Immediately after paying the 24th monthly payment, he wants to settle the balance of the debt with a single payment. How much should this payment be? (3 marks)
- 3) Malinda bought a terrace house for RM185,000. She paid a 10% down payment and the balance was borrowed from a bank that charged interest at the rate of 3.5% compounded monthly. This loan would be paid in monthly installments for 10 years. Find
- The monthly payment (3 marks)
 - The total interest charged (2 marks)
- 4) Luqman took a loan from First Nasional Bank that charged interest of 4% compounded monthly. He has to pay RM1,000 each month for 15 years to settle the loan.
- Find the amount of the loan. (3 marks)
 - If Luqman failed to pay the first 3 monthly payments, find the amount he has to pay on the 4th payment in order to settle the outstanding payments. (3 marks)
- 5) The cash price of an apartment is RM80,000. Suhaimi bought the apartment through an installment plan for 12 ½ years and the interest rate charged was 8% compounded monthly.

- i) Find the equal monthly installment. (3 marks)
 - ii) After paying 1 year, Suhaimi decide to settle all the outstanding balance. Find the amount Suhaimi had to pay on the 13th payment. What is the total interest charged?
- 6) Daus plans to buy a house that costs RM180,000. He can afford to pay 10% as a down payment. The balance must be financed by Suci Bank that charges an interest rate of 8.64% compounded monthly. Daus agrees to pay the loan in monthly installments for 15 years.
- i) How much is Daus's monthly installment?
 - ii) How much did Daus actually pay for the house?
 - iii) Calculate the total interest that is charged to Daus.