

Question 16**(7 marks)**

After paying a deposit for his new apartment, Declan obtains a bank loan for the remaining amount of \$112 000 at 3.26% per annum compounded monthly. He can currently afford to repay \$970 per month at the end of every month.

- (a) Calculate how much he would owe after the 40th repayment. (3 marks)

- (b) Declan decided to deposit a one-off extra amount of \$1600, after the 16th repayment. Calculate the new amount he would owe after the 40th repayment. (4 marks)