1. Angela needs \$4000 to pay for a car. She was given two options by the car seller.

Option A: *Outright Loan*

A loan of \$4000 at a rate of 12% per annum compounded monthly.

(a) Find

(i) the cost of this loan for one year;

(2)

(ii) the equivalent annual simple interest rate.

(2)

Option B: Friendly Credit Terms

A 25% deposit, followed by 12 equal monthly payments of \$287.50.

(b) (i) How much is to be paid as a deposit under this option?

(1)

(ii) Find the cost of the loan under *Friendly Credit Terms.*

(2)

(c) Give a reason why Angela might choose

(i) **Option A**

(ii) **Option B**

(2)

To help Angela, her employer agrees to give her an interest free loan of \$4000 to buy the car. The employer is to recover the money by making the following deductions from Angela's salary:

\$$x$ in the first month,

\$$y$ every subsequent month.

The total deductions after 20 months is \$1540 and after 30 months it is \$2140.

(d) Find x and y.

(4)

(e) How many months will it take for Angela to completely pay off the \$4000 loan?

(2)
(Total 15 marks)