

Question 2**(7 marks)**

A gardener purchases a new lawnmower valued at \$4800. The lawnmower depreciates at a constant rate of \$250 per year.

(a) (i) Determine a recursive rule for the value of the lawnmower after n years. (2 marks)

(ii) Deduce a rule for the n^{th} term of this sequence. (1 mark)

(b) Determine the value of the lawnmower after 4 years. (1 mark)

As part of his business plan, the gardener will sell his lawnmower when its value drops below \$1300.

(c) Calculate when the lawnmower will be sold. (3 marks)