Brook and Charlie bought a house costing £237,000. The value of the house increases by the same percentage each year and after three years the value of the house is £278,295.21.

a) What is the percentage increase in the value of the house each year? (3 marks)

Brook and Charlie paid an initial deposit of 23% and borrowed the rest from a bank on a fixed-rate mortgage. The bank charges a fixed-rate interest of 4% per annum on the borrowed money. Brook and Charlie pay monthly mortgage instalments which are equivalent to paying £10,000 at the start of each year.

b) What proportion of the house do Brook and Charlie own after two years, in relation to its value at that time? Give your answer to a suitable degree of accuracy. (6 marks)