**Question 8** (7 marks)

Anthony and Bryan each invest $4500 in accounts earning compound interest for a period of four years.

(a)    Anthony places his money in an account earning interest at the rate of 3.24% per annum, compounded quarterly.

    (i)    Complete the table below, showing the value of Anthony's investment at the end of the second and third quarters. (2 marks)

| Number of quarters money is invested | 1 | 2 | 3 | … | 16 |
|---|---|---|---|---|---|
| Value of investment ($) | 4536.45 | | | … | 5120.00 |

    (ii)    State the recursive rule for Anthony's investment, which gives the values shown in the table above. (2 marks)

(b)     Bryan places his money in an account earning interest daily. After four years, the value of both Anthony's and Bryan's investments is the same.

Explain how the change to the compounding period has affected the annual rate of interest required for the value of Bryan's investment to be the same as that of Anthony. Include calculations to support your answer.                    (3 marks)