

## Subject 9

### Sequences

*Please don't write on the exam paper.*

Ahmed plans to save £250 in the year 2006, £300 in 2007, £350 in 2008, and so on until the year 2025. His planned savings form an arithmetic sequence with common difference £50.

- a) Find the amount he plans to save in the year 2016.
- b) Calculate his total planned savings over the 20 years period from 2006 to 2025.

Ben also plans to save money over the same 20 years period. He saves £ X in the year 2006 and his planned yearly savings form an arithmetic sequence with common difference £ 60.

- c) Given that Ben's total planned savings over the 20 year period are equal to Ahmed's total planned savings over the same period, calculate the value of X.