

### **Subject 13**

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

The count in a bacteria culture was 400 after 2 hours and 25,600 after 6 hours.

Let us assume that the count of bacteria is a solution of the equation  $y' = ay$ .

- a.** Write down an expression for the count of bacteria after  $t$  hours.
- b.** What was the initial count of bacteria?
- c.** How long does it take for the count of bacteria to double?