

- 30** A detector is used for monitoring an  $\alpha$ -source and a reading of 300 counts is observed. After a time equal to the half-life of the  $\alpha$ -source, the reading has fallen to 155 counts. If a 5 mm thick lead sheet is inserted between the  $\alpha$ -source and the detector, the reading would probably be

**A** 0 counts      **B** 5 counts      **C** 10 counts      **D** 20 counts