SECTION A

Answer ALL the questions in this section.

For questions 1-10, in Section A, select one answer from A to D and put a cross in the box ☒.
If you change your mind, put a line through the box ☒ and then mark your new answer with a cross ☒.

1 A detector and counter were placed near a radium source. A student measured the count for one minute. He used this value to calculate the count rate in Bq from the source.

Which of the following would increase the accuracy of the student's value for the count rate?

☒ **A** Adding the background count rate to the measured count rate.

☒ **B** Increasing the counting time to 10 minutes.

☒ **C** Repeating the count with a different detector and calculating a mean value.

☒ **D** Subtracting the background count from the measured count.

(Total for Question 1 = 1 mark)