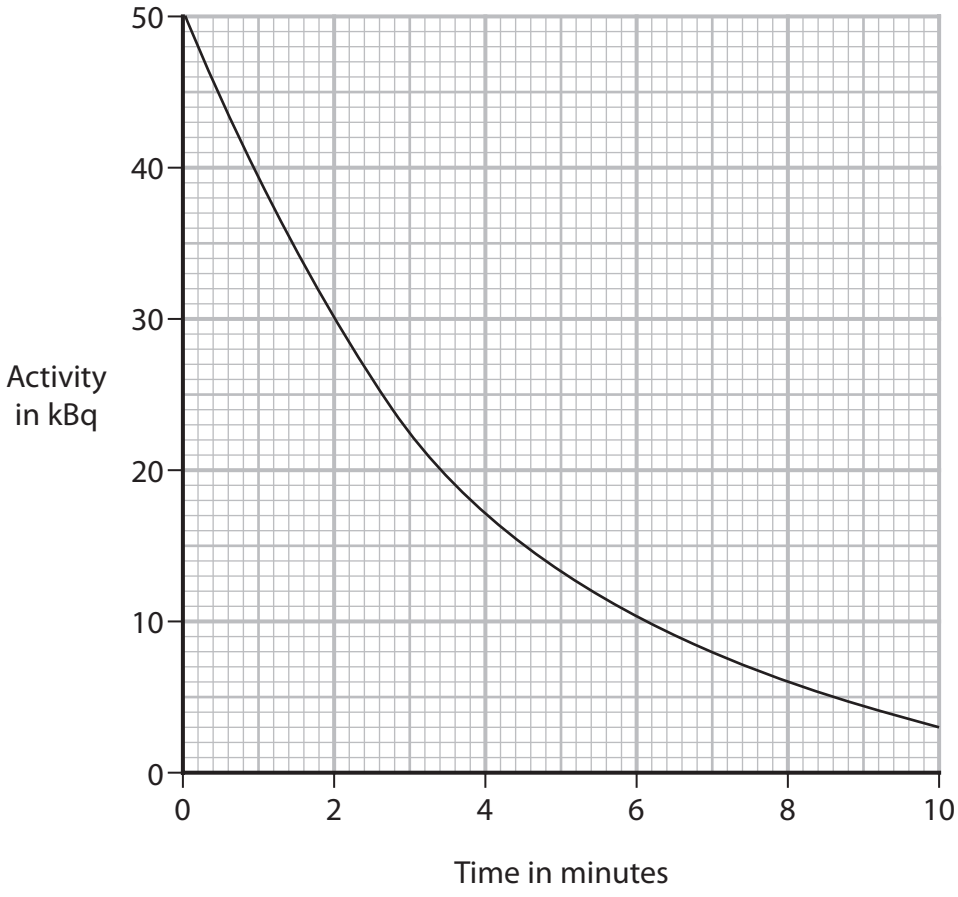
2 A scientist wants to determine the half-life of a radioactive isotope.

The scientist measures the count rate from the radioactive isotope.

(a) State how the scientist should correct the count rate for background radiation.

(1)

(b) The graph shows how the activity of the radioactive isotope varies with time.



(i) Explain what is meant by the term **half-life**.

(2)

(ii) Use the graph to determine the half-life of this isotope.

(2)

half-life = ... minutes

(Total for Question 2 = 5 marks)