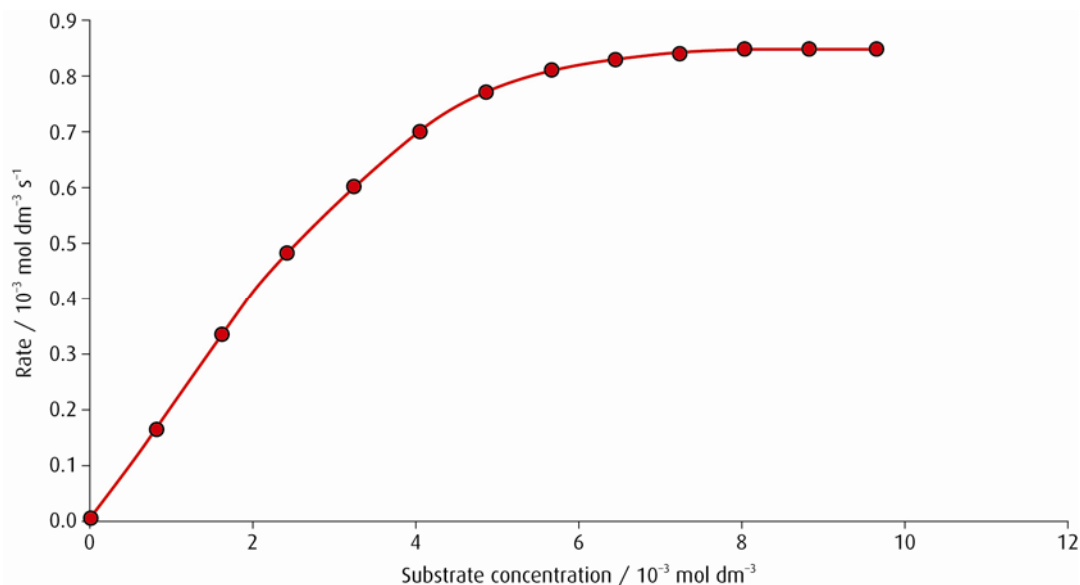


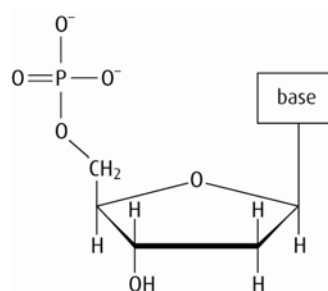
AHL Worksheet – Option B

- 1 The graph below shows the result of varying substrate concentration on the rate of an enzyme-catalysed reaction.

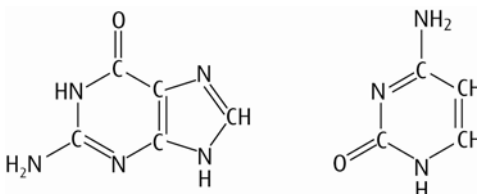


- Explain how an enzyme speeds up a reaction. [2]
 - Explain why the graph levels off at high substrate concentration. [2]
 - Use the graph to estimate V_{\max} and the Michaelis constant, K_m . [2]
 - State and explain the effect of a competitive inhibitor on the value of V_{\max} . [2]
 - State and explain the effect of a non-competitive inhibitor on the value of V_{\max} . [2]
- 2 The structure of a nucleotide is shown.

- a Explain whether this nucleotide is part of the structure of DNA or RNA. [2]



- b The structures of guanine and cytosine are shown below.



Draw a diagram showing the hydrogen bonding that occurs between these bases in DNA. [2]