

Solutions

Each answer shows the steps, then the **result**.

2.1

- Lowers it

2.2

- The region of the enzyme where the substrate binds

2.3

- Its active site has a specific shape that fits only that substrate

3.1 B

- lowering the activation energy

3.2

(a)

- The active site has a specific shape that only the matching substrate fits (like lock and key)

(b)

- The active site changes shape slightly as the substrate binds, gripping it and helping the reaction

3.3

- The enzyme is not consumed — it releases the products and returns to its original shape, ready to bind another substrate