

Solutions

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

2.1

- Makes many copies of a DNA segment

2.2

- Size (length) of the fragments

2.3

- The smaller fragments

3.1 B

- size

3.2

(a)

- Genetic engineering (using a plasmid/vector)

(b)

- The genetic code is universal, so the bacterium's ribosomes read the human gene's codons and translate it into human insulin

3.3

- PCR amplifies the tiny sample into many copies; gel electrophoresis separates the DNA into a band pattern; matching the pattern to a suspect's DNA can identify them