

Foundation Combined — only core Foundation content included.

**Q1. State TWO uses of mitosis in the human body.**

[2 marks]

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**Q2. Describe the sequence of events in mitosis, starting with DNA replication.**

[4 marks]

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**Q3. Explain how cancer arises from abnormal cell division.**

[3 marks]

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**Total: 9 marks**

**Q1 (2 marks)**

*State TWO uses of mitosis in the human body.*

- Growth — increasing the number of cells [1]
- Repair / replacement of damaged or worn-out cells [1]

**Q2 (4 marks)**

*Describe the sequence of events in mitosis, starting with DNA replication.*

- DNA replicates — each chromosome is copied exactly [1]
- Chromosomes condense and become visible [1]
- Chromosomes line up at the equator of the cell [1]
- Spindle fibres pull chromosome copies to opposite poles → cell divides → two genetically identical daughter cells, each with the original chromosome number [1]

**Q3 (3 marks)**

*Explain how cancer arises from abnormal cell division.*

- Mutations in genes that control the cell cycle [1]
- Normal checkpoints fail — cells no longer respond to stop signals [1]
- Cells divide continuously and uncontrollably → tumour forms [1]