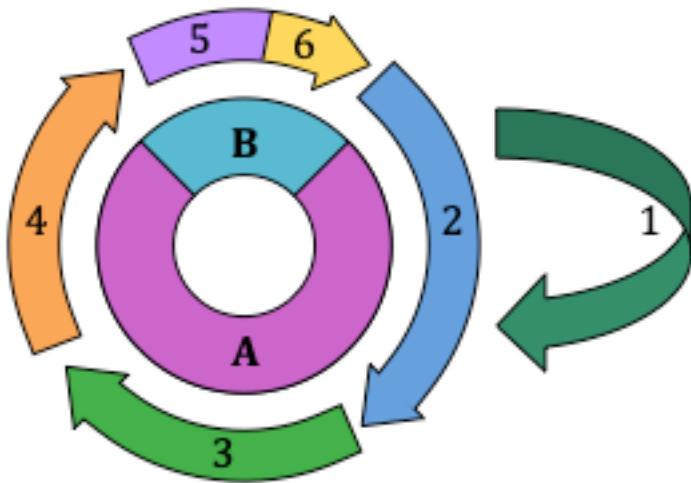


1.6 Cell Division

Cell Cycle

Identify the various stages of the cell cycle



- A.
- B.
- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

List the different events that occur during interphase

- D
- O
- C
- T
- O
- R



Differentiate between the three gap phases

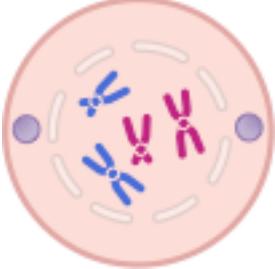
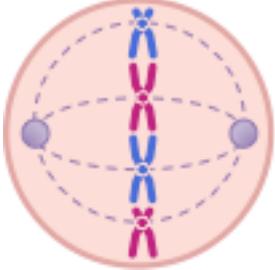
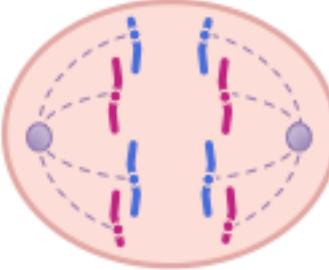
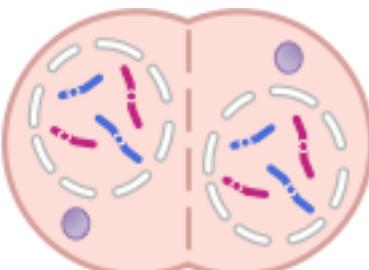
Define mitosis

Outline, with a diagram, the changes in DNA organisation during interphase and mitosis



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Describe the stages of mitosis

Stage	Diagram	Description
Prophase	 A circular cell containing several pairs of chromosomes. The chromosomes are visible as distinct X-shaped structures. They are beginning to condense and align along the equatorial plate, which is indicated by dashed lines.	
Metaphase	 A circular cell showing the chromosomes aligned at the equatorial plate. The chromosomes are represented by pairs of blue and pink X-shaped structures. Microtubules from opposite poles are attached to each pair of chromosomes at their centromeres.	
Anaphase	 A circular cell showing the chromosomes moving toward opposite poles. The blue and pink chromosomes are being pulled by microtubules from each pole. The cell is elongating to accommodate the movement of the chromosomes.	
Telophase	 A circular cell that has divided into two daughter cells. Each daughter cell contains a nucleus with decondensed chromosomes. The nuclear membranes are visible around each nucleus.	

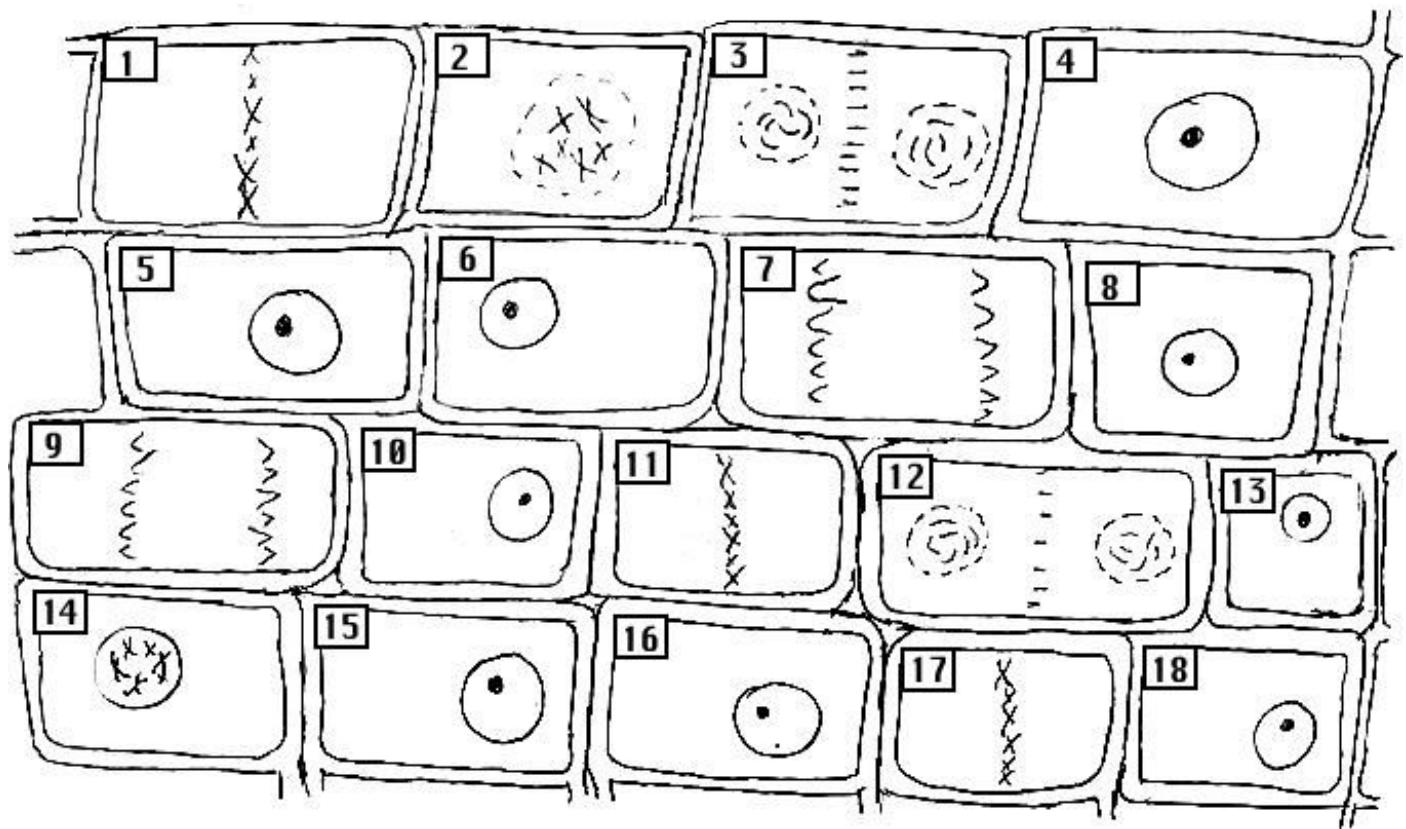
Compare the process of cytokinesis in animal cells and plant cells

List four processes that involve mitosis

T
O
A
D



Identify the stages of mitosis and calculate the mitotic index



Interphase:

Anaphase:

Prophase:

Telophase:

Metaphase:

Mitotic Index:

Cell Cycle Regulation

Outline the role of cyclins in the control of the cell cycle

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Compare apoptosis and necrosis as mechanisms of cell death

Apoptosis	Necrosis
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Define cancer

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Distinguish between primary and secondary tumours

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Outline the role of mutagens and oncogenes in the development of cancer

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