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COMMENTS

Date - 20/10/13

When a vegetative cell divides into two identical daughter cells having a constant number of chromosomes is known as mitotic cell division.

Interphase or resting phase :- It is the phase before cell division and characterised by a dark-enlarged nucleus with chromatin networks distributed throughout the nucleus and one or more dark nucleoli. The nuclear division or karyokinesis comprises of four following phases.

Prophase

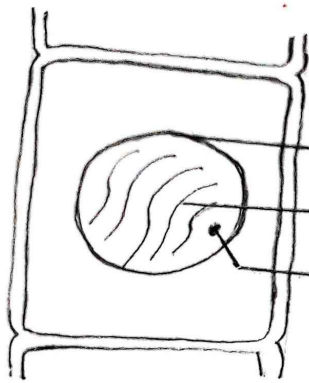
- It is characterised by the presence of nuclear membrane, nucleoli and dark stained long thread like coiled chromosomes.
- The chromosome splits into two chromatids but remain attached at one point by centromere.

Metaphase

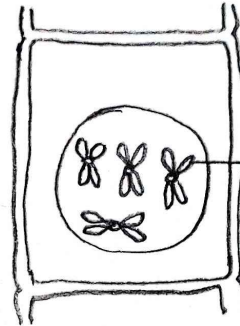
- It is marked by the disappearance of nuclear membrane and nucleoli.
- All the chromosomes come to lie at the equatorial plane.
- The spindle fibres, appearing at two opposite poles touch the centromere of each chromatids.

TO STUDY MITOSIS CELL DIVISION THROUGH PERMANENT SLIDES

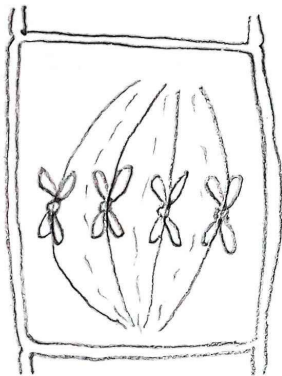
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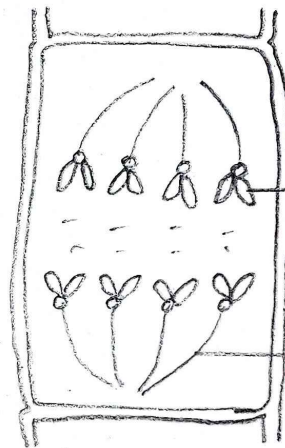
Interphase



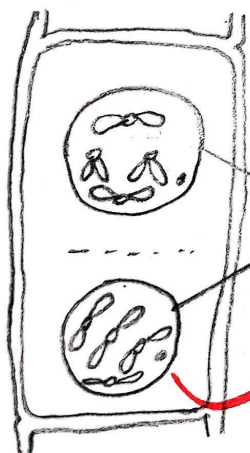
Prophase



Metaphase

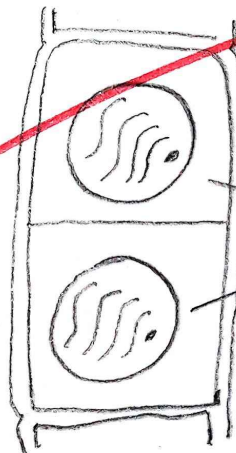


Anaphase



Telophase

daughter nuclei



daughter cells

Sobha
20/10/13

Cytokinesis

Anaphase

- Centromere divides longitudinally into two so that each chromatid bears a centromere of its own.
- Two chromatids repel from each other and is drawn to the opposite pole by contraction of the spindle fibres. The chromatids that automatically become chromosomes appear as V with their points towards the pole of the cell.

Early Telophase

- The nuclear membrane and nucleoli reappear, so it resembles with the cell of prophase.
- Chromosomes return to their long slender and coiled form and distribute throughout the nucleus.

Late Telophase

- The cell plate formed at the middle of the cell divides the two newly formed nuclei and cytoplasm into ~~two~~ daughter cells. Division of cytoplasm is known as cytokinesis.