(ii) Metaphase :-

- The chromosomes arranged at the equatorial (भूमध्यरेखीय) Plane
- Each centromere is joint by two chromosomal fibre one from each Pole.
- Some other fibres of the spindle extend from one pole to the other Pole. These are known as continuous fibres.
- The centromere of each chromosomes divides into two, each being associated with a chromatid.

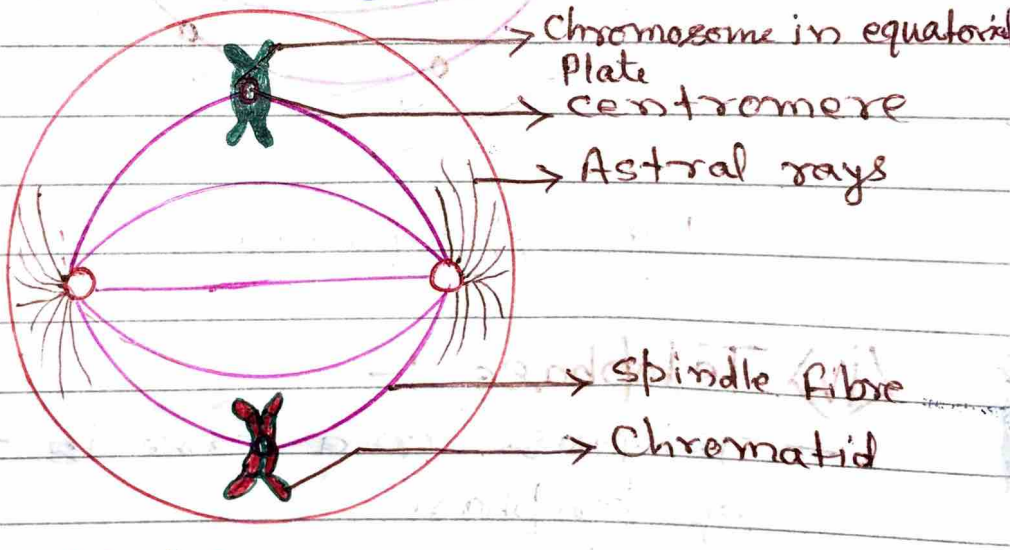

Fig- Metaphase

(iii) Anaphase :-

- It is shortest duration phase.
- The chromatids of each chromosomes get separate and form two chromosomes called daughter chromosomes.
- The daughter chromosomes move towards the opposite pole of the cell.
- This migration of the daughter chromosomes is achieved by Contraction (सिकुड़न) of chromosomal fibres and stretching (खींचना) of

the Chromosome interzonal fibres.
- The fibres which occurs between the chromosomes are called interzonal fibres.
- The chromosomes becomes J, L or V shaped

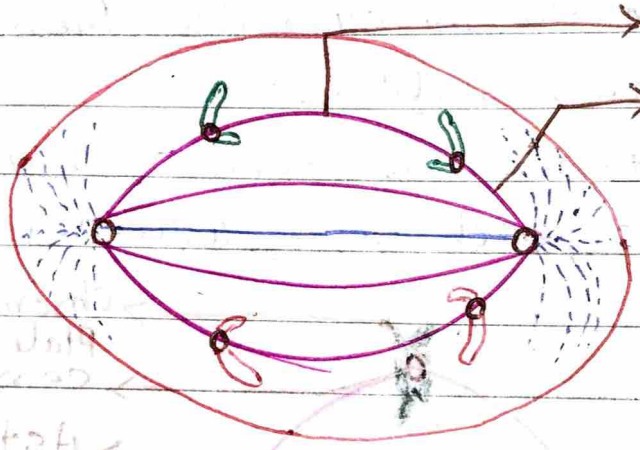

Fig :- Anaphase

(iv) Telophase :-

- Telophase in a sense is reversible process of prophase.
- The chromosomes form the chromatin (1) network. (1- nuclear materiel the chromosome, DNA & histone)
- The nuclear membrane and nucleolus are reappear.
- Telophase result in the formation of two daughter nuclei (समान) identical in number of chromosomes and amount of DNA.
- After Mitosis quantity of DNA in each daughter cell nucleus will be same as in the parent nucleus.

[a] [redacted] :-

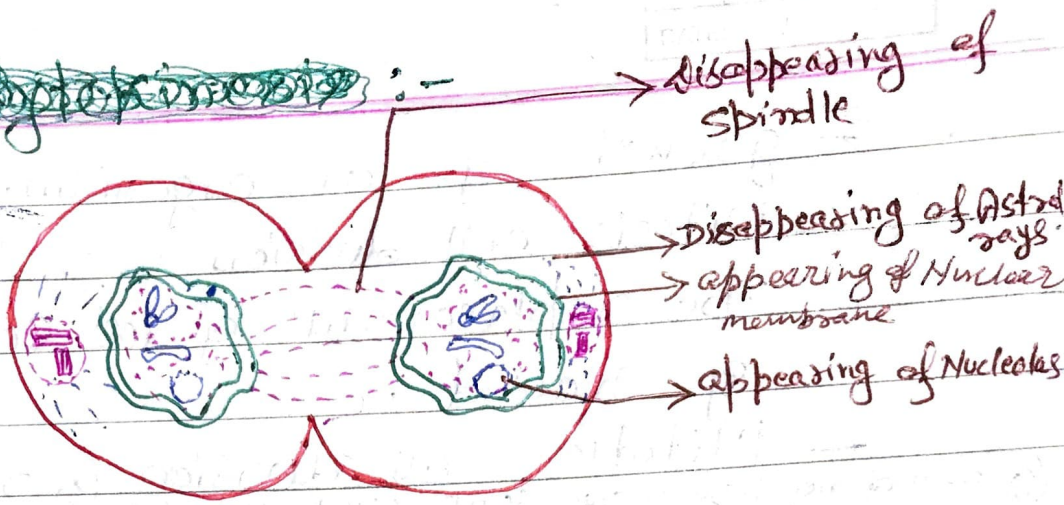

Fig:- Early Telophase

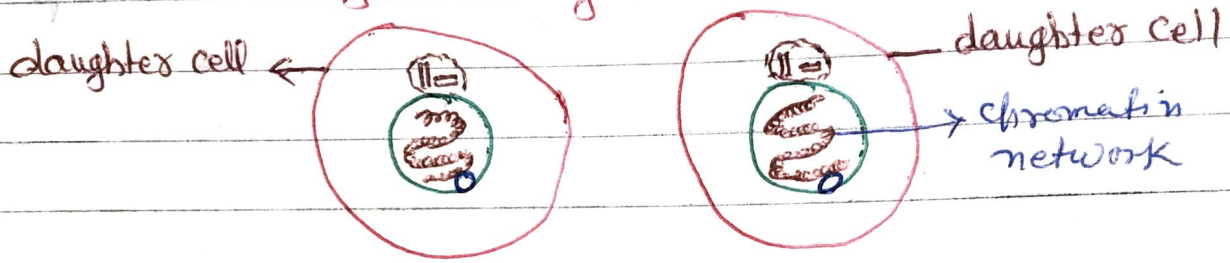

Fig:- Late Telophase

[b] Cytokinesis :-

Division of cytoplasm is called Cytokinesis.

- In animal cell, Cytokinesis takes place through Cell Furrow (कोशिका खिंचाव)
- In Plant cell, Cytokinesis takes place by the formation of cell plate.
- Cell wall is formed from cell plate which is also referred to a Phragmoplast.
- Phragmoplast is related to Cytokinesis.

Significance of Mitosis :-

- The major significance of mitosis is the Production of genetically identical (समान) cells.
- Mitosis cell division responsible for

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→ growth of an organism.

— Mitosis cell division is responsible for the replacement of lost cells, healing of wound.

— Mitotic cell division is responsible for (growth of new tissue or organ to replace one, which has been lost or injured) regeneration and asexual Reproduction.