

### ii) Metaphase I

- The bivalent chromosomes arranged themselves on the spindle fibre forming equatorial plate (MET) - centromere are located at either side of metaphase plate.

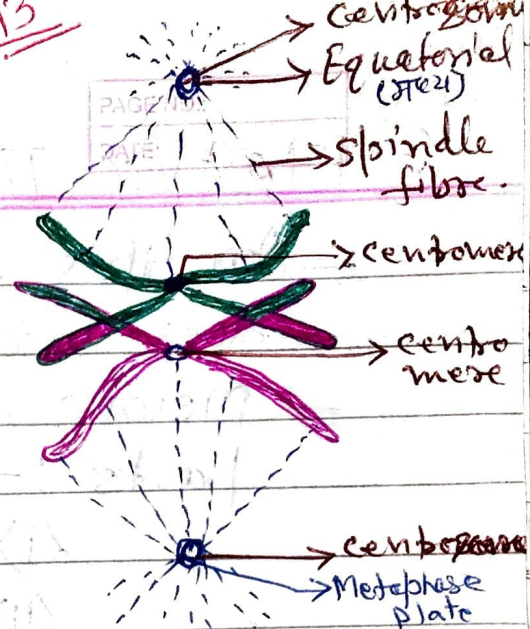


Fig - Metaphase I

- The centromere of a chromosome does not divide during this stage.

### iii) Anaphase I :-

- Each chromosome with its two chromatids and undivided centromere moves towards the opposite poles of the cell.
- When separated, in each chromosome the sister chromatids are connected by a centromere.



This stage of chromosome is called Dyads

- Shortening of spindle fibre takes place

### iv) Telophase I :-

- The haploid no. of chromosomes after reaching their poles, becomes very long & <sup>thin</sup> coiled
- The nuclear membrane & nucleolus disappears
- Two daughter nuclei are formed
- After telophase cytokinesis take place



A



B

## ② Meiotic II (Homotypic division)

- In this division chromosome number does not ~~not~~ change.
- Meiotic II is also divided into two parts :-

<I> Karyokinesis

<II> Cytokinesis

<I> Karyokinesis :-

Karyokinesis is also divided into four Phases :-

i) Prophase II

ii) Metaphase II

iii) Anaphase II

iv) Telophase II

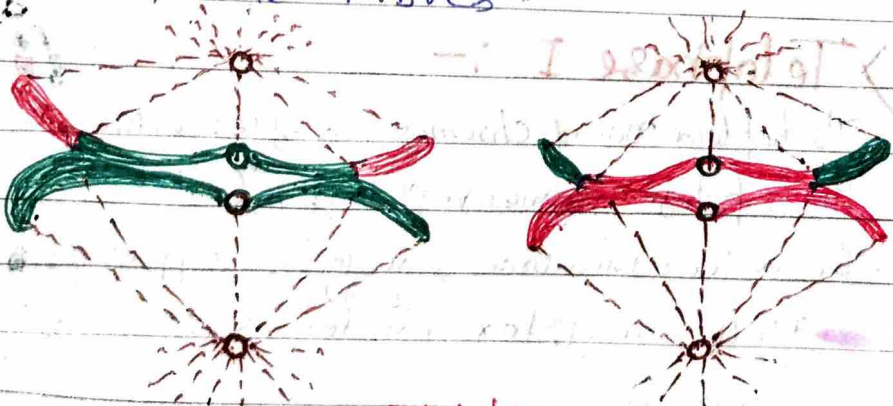
i) Prophase II :- (Fig same as Telophase I)

- The chromosomes appear <sup>(visible)</sup> distinct with two chromatids.

- Nuclear membrane & Nucleolus disappear

- spindle fibres are formed

- The two chromatids of a chromosome look "X" shaped attached by their centromere to spindle fibres.



"A" Fig: Metaphase II "B"

ii) Metaphase II :-

- The chromosome get arranged on the equator.
- The two chromatids of each chromosomes are separated by the division of centromere and are attached to the spindle.

iii) Anaphase II :-

- The separated chromatids becomes daughter chromosomes and move opposite poles due to contraction of spindle fibres.

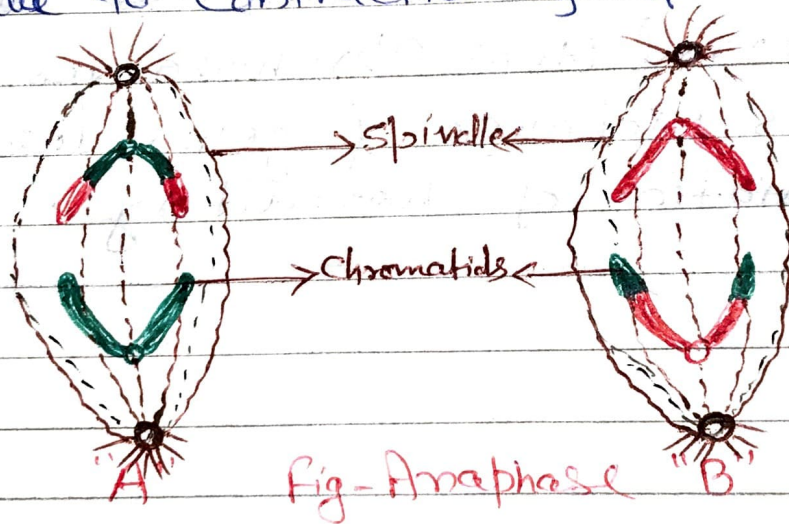


Fig - Anaphase "B"

iv) Telophase II :-

- During this stage the daughter chromosomes again form chromatin thread.
- The nuclear membrane and nucleolus reappear.
- Spindle fibre disappears.



Fig - Four daughter cell stage.