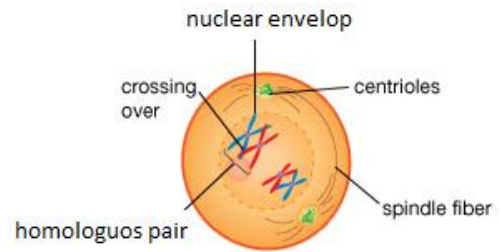


Meiosis

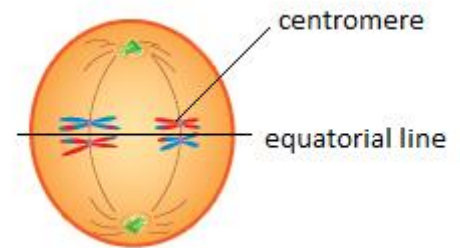
Prophase I

- chromosomes condense and make **homologous pairs**
- centrioles migrate to opposite poles
- nuclear membrane breaks down
- spindle fibres form
- **crossing over** take place



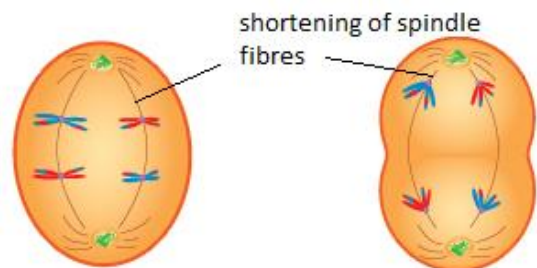
Metaphase I

- chromosomes line up along the equator in **homologous pairs**
- microtubules of mitotic spindle attach to chromosomes in the **centromere**



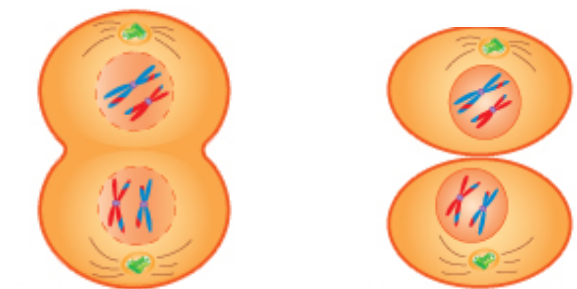
Anaphase I

- spindle fibres begin to shorten
- centromeres do not split and **whole chromosomes travel towards the opposite poles of cell**



Telophase I

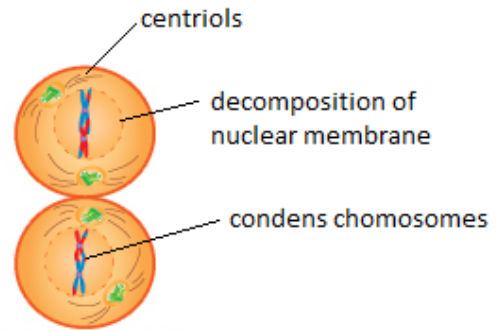
- chromosomes arrive at the poles
- nuclear envelop reforms around chromosomes on each side
- each daughter cell now has **half the number of chromosomes** but each chromosome consists of a pair of chromatids
- spindle fibres disappear
- **cytokinesis**, the pinching of the cell membrane in animal cells or the formation of the cell wall in plant cells, occurs, completing the creation of two daughter cells



Meiosis

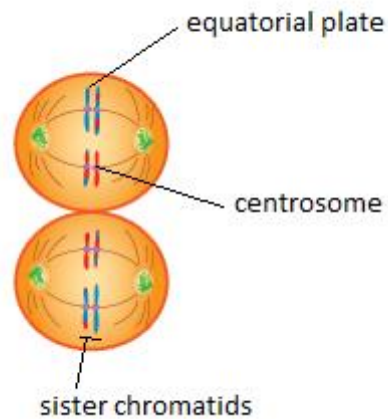
Prophase II

- nucleolus and nuclear envelope disappear
- chromatids shorter and thicker
- centrioles move to the polar regions and arrange spindle fibres



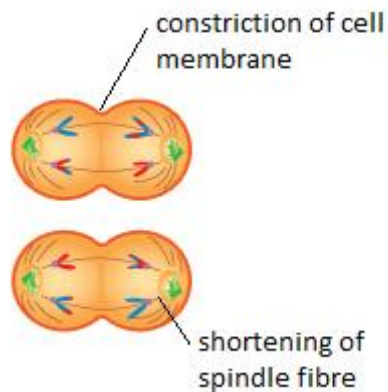
Metaphase II

- **spindle fibres** from the centrioles attach to **centromeres**
- chromosomes are lined at **equatorial plate**



Anaphase II

- sister chromatids are pulled towards opposite poles (the sister chromatids by convention are now called sister chromosomes)
- cell membrane begins to **constrict**



Telophase II

- decondensation and lengthening of the chromosomes
- break down of the spindle
- nuclear envelope reforms
- cleavage produces a total of four daughter cells, each with a **haploid set of chromosomes**

