

Five phases of mitosis

Prophase - Chromosomes condense and Chromatids connect at centromeres.

Metaphase - Chromatid pairs align at metaphase plate.

Anaphase - Daughter chromosomes separate.

Telophase - Nuclear envelopes reform.

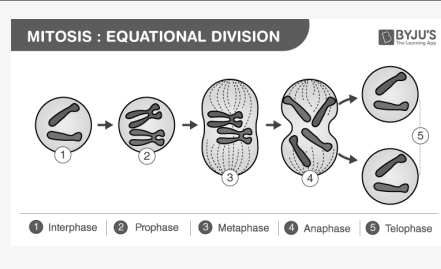
Cytokinesis - Division of the cytoplasm to form two identical daughter cells.

Mitosis is the process of cell division which results in the production of two daughter cells from a single-parent cell.

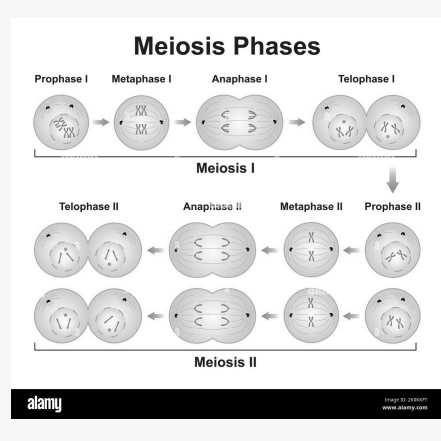
Phases in Meiosis

Meiosis 1	Meiosis 2
Prophase 1 - Each chromosome duplicates and remains closely associated. These are called sister chromatids.	Prophase 2 - DNA does not replicate.
Metaphase 1 - Chromosomes align at the center of the cell.	Metaphase 2 - Chromosomes line up at the center of the cell.
Anaphase 1 - Chromosome pairs separate with sister chromatids remaining together.	Anaphase 2 - Centromeres divide and sister chromatids move separately to each pole.
Telophase 1 - Two daughter cells are formed with each daughter containing only one chromosome of the chromosome pair.	Telophase 2 - Cell division is complete.
Four haploid daughter cells are formed after the process.	

Picture of the Mitosis cycle



Picture of the Meiosis Cycle



Differences in Mitosis and Meiosis

Mitosis	Meiosis
Asexual	Sexual
Cell divides once	Cell divides twice
Two daughter cells	Four haploid daughter cells
Genetic information is identical	Genetic information is different

The Cell life Cycle

- Cell Division - the reproduction of cells
- Apoptosis - genetically programmed death cells
- Mitosis - the nuclear division of somatic cells
- Meiosis - the nuclear division of sex cells



