Mitosis: Cells Reproduce

In mitosis, one cell splits into two genetically identical daughter cells.

For instance, if a cell has 46 chromosomes (23 pairs) and it undergoes mitosis, the daughter cells will have 46 chromosomes (23 pairs).

If a cell has 2n chromosomes and it undergoes mitosis, the daughter cells will have 2n chromosomes.

In humans, mitosis is used to make body cells (aka somatic cells).

In other organisms, mitosis is used for asexual reproduction.


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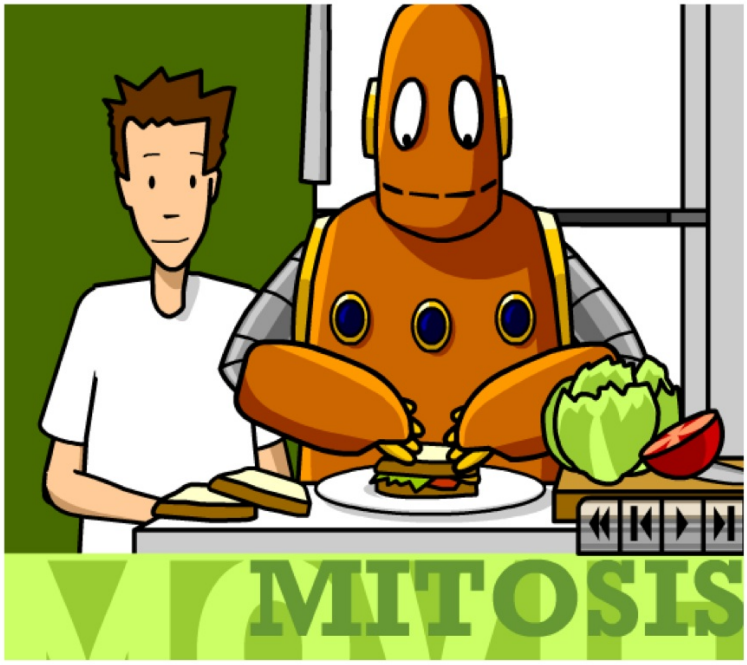

MITOSIS

Comparing Mitosis and Meiosis

Number of divisions:

MITOSIS - 1 DIVISIONS.

MEIOSIS - 2 DIVISIONS.

Crossing over:

PROMETAPHASE (I)

- CHROMOSOMES TRADE SEGMENTS.

Cells produced: 2 CELLS - MITOSIS

4 " - MEIOSIS.

Meiosis: Cells Make Gametes

In meiosis, one cell splits into four genetically non-identical daughter cells.

For instance, if a cell has 46 chromosomes (23 pairs) and it undergoes meiosis, the daughter cells will have 23 chromosomes.

If a cell has 2n chromosomes and it undergoes meiosis, the daughter cells will have n chromosomes.

If a cell is diploid (2n) and it undergoes meiosis, the daughter cells will be haploid (n).

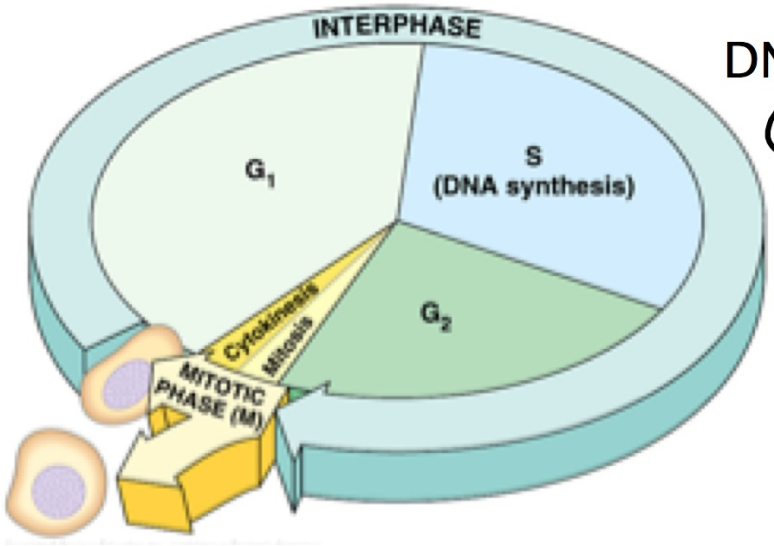
In humans, meiosis is used to make sex cells (aka gametes, germ cells, or sperm and eggs cells).

46-49.

Growth

DNA replication

Copy DNA



Growth

Division (mitosis/meiosis)

Putting it all together