

Genetics Part III-Meiosis

- Reproduction is the process of creating new organisms
- There are 2 types:
 - **Asexual Reproduction**-DNA comes from only 1 parent to make a new organism
 - **Sexual Reproduction**-DNA is combined from 2 parents to make a new organism
- Most organisms have 2 main types of cells
 - **Somatic cells**-are the normal body cells that do everything that organisms need to live
 - **Gametes**-are special cells that the organism uses to reproduce
- In somatic cells, organisms have 2 copies of each chromosome
 - One comes from their dad
 - One comes from their mom
- If a cell has extra copies of chromosomes, it creates problems for the cell
- To prevent these problems, cells go through a special process called **meiosis** to make sure that their offspring do not have too many chromosomes
- The purpose of Meiosis is to make 4 cells that each have 1 copy of every chromosome for an organism
- Meiosis looks a lot like mitosis, but it happens twice
- It happens in 2 parts:

- Meiosis I



Prophase I



Metaphase I



Anaphase I



Telophase I

- Meiosis II-



Prophase II



Metaphase II



Anaphase II



Telophase II



4 new gametes