

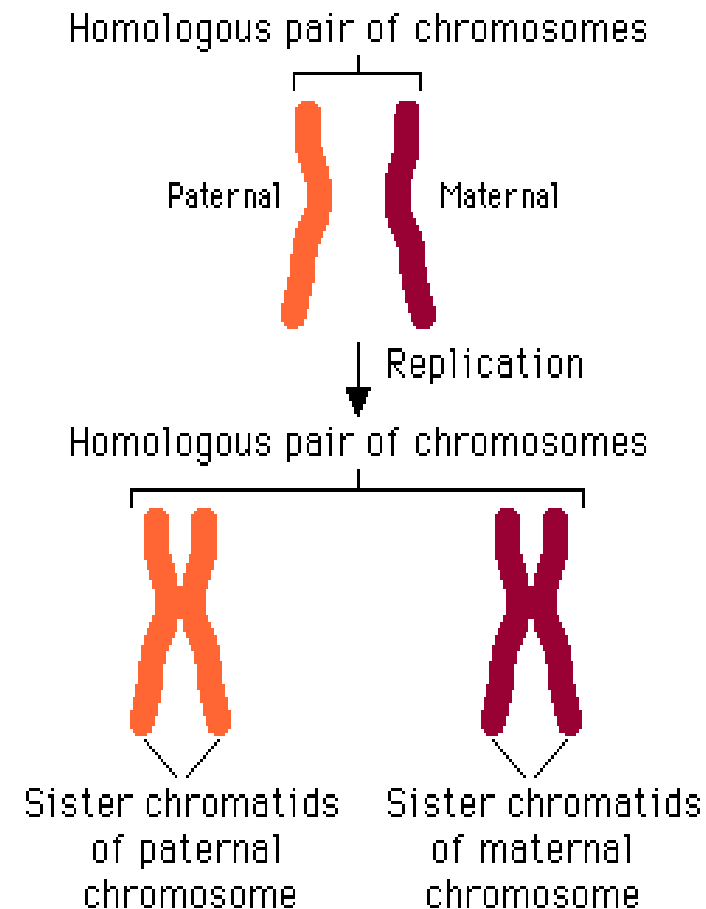
MEIOSIS

Creating gametes (sex cells)



Chromosome Number

- A human body cell has 46 chromosomes
- 23 from dad and 23 from mom
- These sets of chromosomes are homologous, meaning that each chromosome that came from dad has a corresponding chromosome from mom.



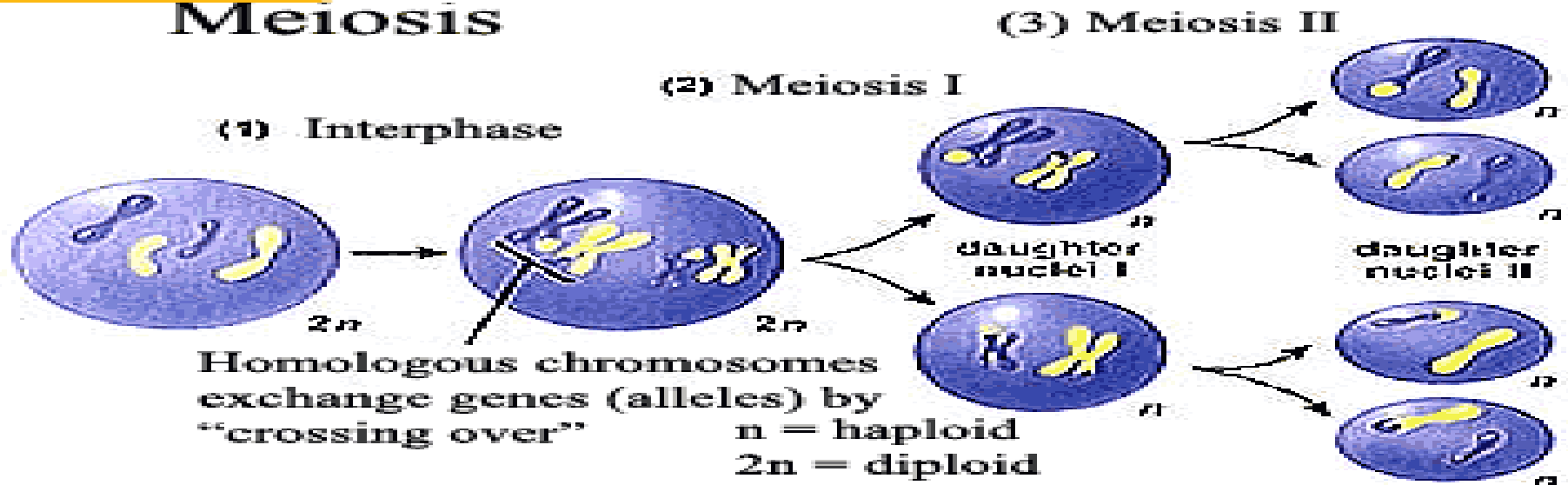
Diploid and Haploid

- A cell that contains both sets of homologous chromosomes is said to be diploid.
- Diploid= “two sets”, $2N$, or $2N=46$
- A cell that only contains 1 set of chromosomes is said to be haploid.
- Haploid= “one set”, N , or $N=23$

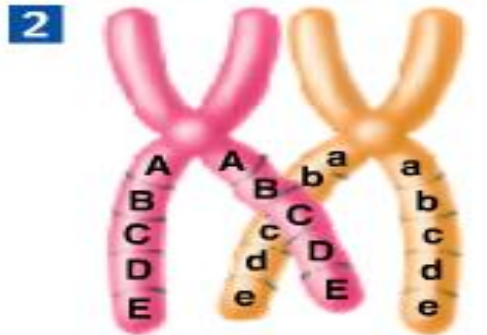
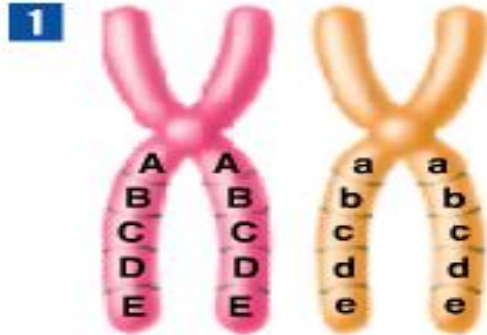
Phases of Meiosis

- Occurs in 2 divisions- meiosis I and meiosis II
- In the end one diploid cell will become 4 haploid cells

Meiosis



Crossing Over occurs in Meiosis I



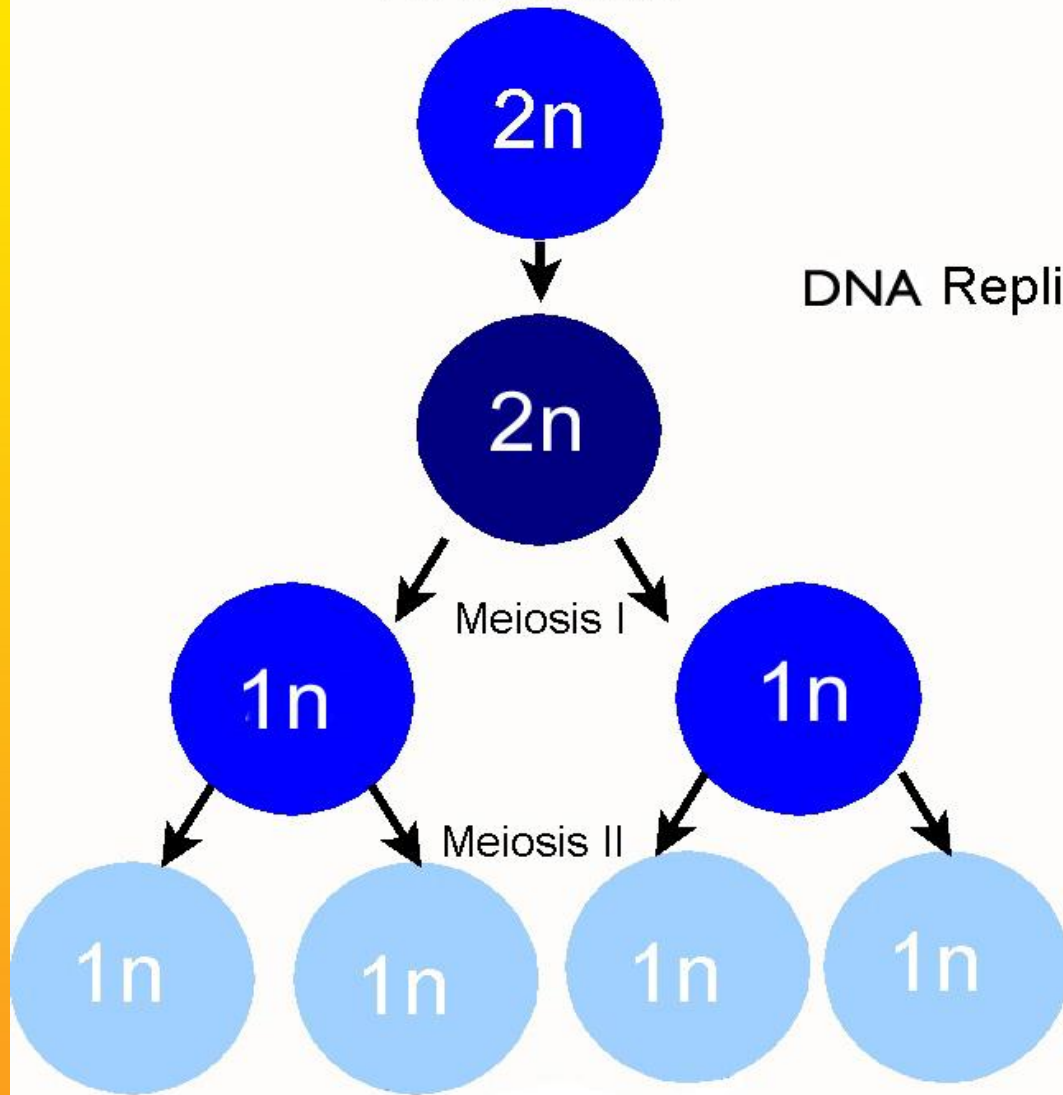
1. Homologous chromosomes form a tetrad
2. Chromatids cross over one another
3. The crossed sections of chromatids are exchanged
4. This produces a new combination of genes which contributes to diversity within a population.

Gamete Formation occurs in Meiosis II

- Meiosis I results in 2 haploid daughter cells
- Meiosis II results in 4 haploid daughter cells
- The haploid gamete in males is sperm
- The haploid gamete in females is the egg



Meiosis



Mitosis

