

Name: _____
Blk: ___ Date: _____

Science 9 **Notes on Meiosis**

Meiosis is an important aspect of _____
Sexual reproduction, through the shuffling of DNA, produces genetic diversity.

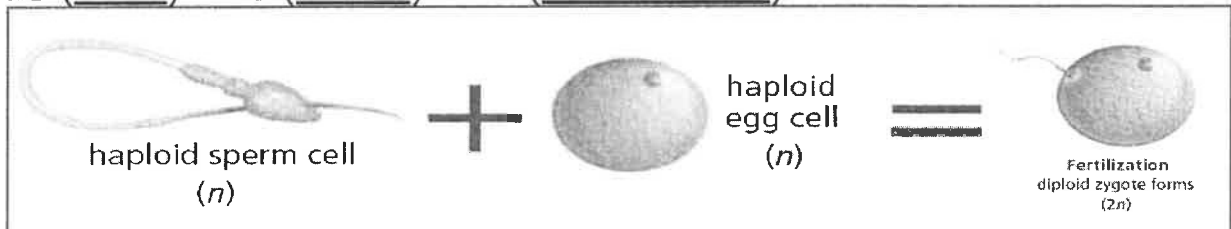
This variation offspring produces individuals that may have _____ over one another.

Role of Gametes:

Normal body cells have a _____ chromosome number, meaning chromosomes occur in _____.

In humans, the male and female each contribute 23 chromosomes - when _____ takes place:

$$23 (\text{ }) + 23 (\text{ }) = 46 (\text{ })$$



The zygote goes on to develop into an _____, and on into a complete individual. When the time comes, the cycle repeats - humans produce _____ (either egg or sperm) that have half (_____) the normal number of chromosomes.

Meiosis

Meiosis produces gametes with _____ the chromosomes compared to body cells:

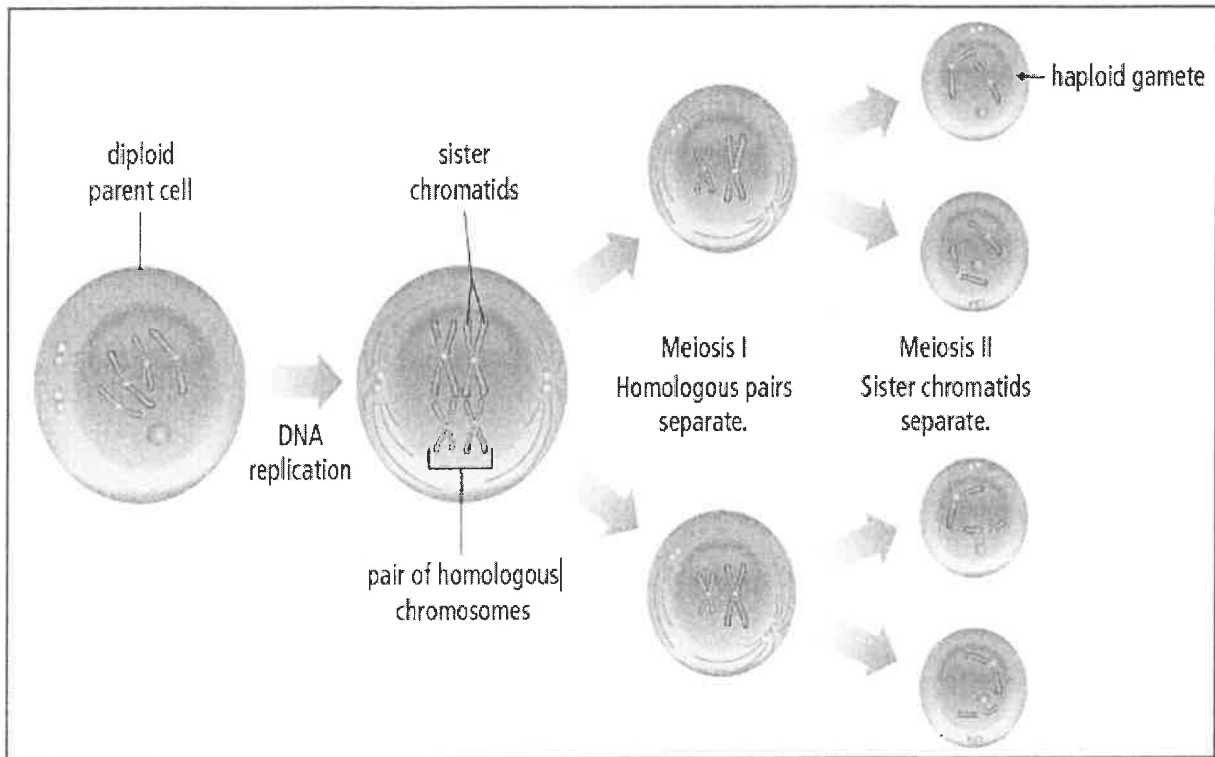
Meiosis I:

Matching chromosome pairs (_____) move to opposite poles of the cell - two daughter cells result.

Meiosis II:

_____ of each chromosome are pulled apart - the end result is _____ haploid cells, each with half the number of chromosomes. These develop into _____.

Events in Meiosis:



Crossing Over

In meiosis I, chromatids of chromosome pairs can _____ each other and exchange DNA segments - this _____ genetic possibilities and produces more variation

Independent Assortment

The pairs of chromosomes in meiosis I separate _____, creating many different combinations of chromosomes in the daughter cells

Meiosis Details:

Gametes do not form equally in males and females:

In males:

all _____ cells resulting from meiosis develop into _____.

In females:

_____ cell gets most of the cytoplasm and becomes the _____.