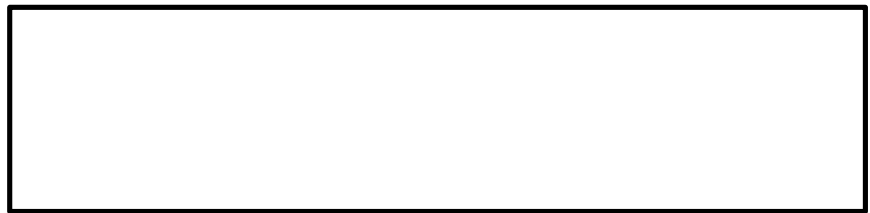


# Meiosis Notes

Gametes

- Organisms that reproduce \_\_\_\_\_ are made up of \_\_\_\_\_ different types of cells.
- \_\_\_\_\_ are “body” cells and contain the normal number of chromosomes ....called the “\_\_\_\_\_” number (the symbol is \_\_\_\_\_). Examples would be ... \_\_\_\_\_, brain cells, etc.
- \_\_\_\_\_ are the “sex” cells and contain only \_\_\_\_\_ the normal number of chromosomes.... called the “\_\_\_\_\_” number (the symbol is \_\_\_\_\_)..... \_\_\_\_\_ cells and \_\_\_\_\_ are gametes.
- The Male Gamete is the \_\_\_\_\_ and is produced in the male gonad the Testes.
- The Female Gamete is the \_\_\_\_\_ and is produced in the female gonad the Ovaries.  
The \_\_\_\_\_ of a sperm and egg to form a \_\_\_\_\_.  
A zygote is a \_\_\_\_\_



Chromosomes

- If an organism has the \_\_\_\_\_ number (2n) it has two matching homologues per set. One of the homologues comes from the \_\_\_\_\_ (and has the mother's \_\_\_\_\_).... the other homologue comes from the \_\_\_\_\_ (and has the father's \_\_\_\_\_).
- Most organisms are diploid. Humans have \_\_\_\_\_ sets of chromosomes... therefore humans have \_\_\_\_\_ total chromosomes..... The \_\_\_\_\_ number for humans is 46 (46 chromosomes per cell).

Homologous Chromosomes

- \_\_\_\_\_ of chromosomes (maternal and paternal) that are \_\_\_\_\_ in shape and size.
- Homologous pairs (\_\_\_\_\_) carry \_\_\_\_\_ controlling the \_\_\_\_\_ inherited traits.
- Each \_\_\_\_\_ (position of a gene) is in the same position on homologues.
- Humans have \_\_\_\_\_ pairs of homologous chromosomes.
- \_\_\_\_\_ 22 pairs of \_\_\_\_\_
- \_\_\_\_\_ pair of sex chromosomes



Sex Chromosomes	<p>The Sex Chromosomes _____ for the sex of the _____.</p> <p>** If the offspring has _____ “X” chromosomes it will be a _____.</p> <p>** If the offspring has _____ “X” chromosome and _____ “Y” chromosome it will be a _____.</p> <div style="border: 1px solid black; height: 100px; width: 100%;"></div>
Meiosis	<p>is the process by which ” _____ ” (sex cells) , with half the number of chromosomes, are produced.</p> <p>During _____ diploid cells are reduced to _____ cells</p> <p>_____ (2n) → _____ (n)</p> <p>If Meiosis did not occur the chromosome number in each new generation would _____....</p> <p>The offspring would _____.</p> <p>Meiosis is Two cell divisions (called _____ and _____) with only _____ duplication of chromosomes.</p>
Interphase	<p>Similar to _____.</p> <p>Chromosomes _____</p> <p>Each duplicated chromosome consists of two _____ sister chromatids attached at their centromeres.</p> <p>Centriole pairs also replicate.</p>
Meiosis 1	<p>Cell division that reduces the chromosome number by _____.</p> <p>four phases:</p> <p>a. _____</p> <p>b. _____</p> <p>c. _____</p> <p>d. _____</p>
Prophase 1	<p>_____ and most complex phase.</p> <p>90% of the meiotic process is spent in Prophase I</p> <p>_____.</p> <p>_____ occurs: homologous chromosomes come together to form a tetrad.</p> <p>_____ is two chromosomes or four chromatids (sister and nonsister chromatids).</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>Tetrad</p> <div style="border: 1px solid black; height: 100px; width: 100%;"></div> </div> <div style="text-align: center;"> <p>Crossing Over</p> <div style="border: 1px solid black; height: 100px; width: 100%;"></div> </div> </div>
Crossing Over	<ul style="list-style-type: none"> <li>• <b>Crossing Over is one of the Two major occurrences of Meiosis</b></li> <li>• <b>(The other is Non-disjunction)</b></li> <li>• <b>During Crossing over segments of nonsister chromatids break and reattach to the other chromatid. The Chiasmata (chiasma) are the sites of crossing over.</b></li> <li>• </li> </ul>