|  |  |
| --- | --- |
| 36 GametesChromosomesHomologous Chromosomes | * 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 \_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_*** 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).
* **\_\_\_\_\_\_\_\_\_ 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 ChromosomesMeiosisInterphaseMeiosis 1Prophase 1Crossing Over | The Sex Chromosomes \_\_\_\_\_ for the sex of the \_\_\_\_\_\_\_\_\_\_\_\_.\*\* If the offspring has \_\_\_\_\_\_ “X” chromosomes it will be a \_\_\_\_\_\_\_\_\_\_. \*\* If the offspring has \_\_\_\_\_ “X” chromosome and \_\_\_\_\_ “Y” chromosome it will be a \_\_\_\_\_\_\_\_.is the process by which ”\_\_\_\_\_\_\_\_\_” (sex cells) , with half the number of chromosomes, are produced.During \_\_\_\_\_\_\_\_\_ diploid cells are reduced to \_\_\_\_\_\_\_\_\_\_ cells \_\_\_\_\_\_\_\_\_ (2n) → \_\_\_\_\_\_\_\_\_\_ (n)If Meiosis did not occur the chromosome number in each new generation would \_\_\_\_\_\_\_\_\_\_…. The offspring would \_\_\_\_\_\_.Meiosis is Two cell divisions (called \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_)with only \_\_\_\_\_\_ duplication of chromosomes. Similar to \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_.Chromosomes \_\_\_\_\_\_\_\_\_\_\_\_Each duplicated chromosome consists of two \_\_\_\_\_\_\_\_\_\_\_ sister chromatids attached at their centromeres.Centriole pairs also replicate.Cell division that reduces the chromosome number by \_\_\_\_\_\_\_\_\_\_\_\_.four phases: a. \_\_\_\_\_\_\_\_\_\_\_\_ b. \_\_\_\_\_\_\_\_\_\_\_\_ c. \_\_\_\_\_\_\_\_\_\_\_\_ d. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_and most complex phase.90% of the meiotic process is spent in Prophase I\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_.\_\_\_\_\_\_\_\_\_\_\_\_\_ occurs: homologous chromosomes come together to form a tetrad.\_\_\_\_\_\_\_\_\_\_ is two chromosomes or four chromatids (sister and nonsister chromatids). Tetrad Crossing Over * **Crossing Over is one of the Two major occurrences of Meiosis**
* **(The other is Non-disjunction)**
* **During Crossing over segments of nonsister chromatids break and reattach to the other chromatid. The Chiasmata (chiasma) are the sites of crossing over.**
 |