**Anatomy**

**Chapter 3: Cells’ Structure and Function**

**Mitosis and Meiosis**

**Mitosis**

* Each cell has \_\_\_\_\_ chromosomes in \_\_\_\_\_ pairs.
* You don’t have to replicate the entire cell, just the \_\_\_\_\_\_\_\_.
* The phases of mitosis are

P\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ M\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ A\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ T\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* Most of the cell’s life is spent in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, between episodes of mitosis.
* Long strings of DNA starts loose and uncoiled called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* During prophase, the chromatin begins to condense and form \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Microtubules provide\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Metaphase is the longest phase of mitosis and involves the moving of the chromosomes by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ attached to the microtubule ropes. The chromosomes are then lined up in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the nucleus.
* The chromosomes are pulled apart from their pairs to opposite sides during\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* During telophase, the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ reforms and the chromosomes relax back into \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* The beginning of division of the cell is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the process of the separation of the cell into two different cells.

**Meiosis**

* Occurs in \_\_\_\_\_\_\_ cells.
* Results in two daughter cells that are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to each other.
* Sex cells only have \_\_\_\_\_\_\_ chromosomes; they are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells.
* Meiosis is a lot like mitosis, except \_\_\_\_\_\_\_\_\_\_\_\_.
* Interphase is when all the key players are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Once attached, each single chromosome is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, one on each side of the X.
* The point is to end up with \_\_\_\_\_\_ sex cells.
* When chromatids become tangled, it is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Trading sections of DNA is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Recombination is how we get genetic diversity.
* The \_\_\_\_ pair of chromosomes is the sex chromosomes.
* Half the sperm will have and X, resulting in \_\_\_\_\_\_\_\_\_\_\_\_ sperm and half will have Y, resulting in \_\_\_\_\_\_\_ sperm.
* The second round of meiosis is to pull the chromosomes apart into single strands, so there is no \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the chromosomes in meiosis II.
* This produces \_\_\_\_ cells with \_\_\_\_\_\_ chromosomes each.
* During telophase, one egg gains more of the cytoplasm nutrients; the other eggs are called \_\_\_\_\_\_\_\_\_ bodies.