**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per:\_\_\_**

**Cell Theory, and Reproduction**

**Scientists that contributed to the Cell Theory**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ –1665 discovered cells by looking at a slice of \_\_\_\_\_\_\_\_\_\_\_\_ under the microscope. He described the cells as tiny boxes or honeycomb. He thought they only existed in plants and fungus.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: 1673 – observed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ under a hand held microscope and discovered single-celled organisms. He called them “animalcules”. He also observed the blood cells from fish, birds, frogs, dogs, and humans and found cells were found in animals AND plants.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, 1838- German Botanist, concluded that all \_\_\_\_\_\_\_\_\_parts are made of \_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1839- German physiologist, who was a close friend of Schleiden, stated that all \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are composed of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 1858-, German physician, concluded that cells \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Obj 1: I can explain the 3 parts of the cell theory.**

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Schleiden & Schwann)(1838-39)
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Schleiden & Schwann)(1838-39)
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (Virchow)(1858)

**Obj 2: I can describe sexual and asexual reproduction**

Sexual Reproduction – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: Our bodies create sex cells (egg and sperm) through a process called **\_\_\_\_\_\_\_\_\_\_\_\_\_\_. – Meiosis is a form of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ reproduction that allows for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ reproduction to occur.**

Sexual reproduction produces offspring that are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ from their parents.

Asexual Reproduction - produces offspring that are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the parent cell.

The cells in our bodies reproduce asexually. Our body cells duplicate themselves in a process called **\_\_\_\_\_\_\_**

Other forms of asexual reproduction include

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: unicellular organisms divides into 2 equal parts (amoeba)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: parent plants send out “runners” to grow more identical plants (strawberries and poplar trees)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: the parent produces an outgrowth or bud which detaches and becomes a new individual (hydra, yeast, coral)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: spores are released and become new plants (sporozoa, ferns)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: when parts of an organism can regrow missing parts or become new organisms if the injury is severe (star fish and sponges)



* mitosis produces \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* meiosis produces \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The cells created from **mitosis** are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(46 chromosomes)

The cells created from **meiosis** are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(23 chromosomes)

* **Diploid (2n)** – \_\_\_\_\_\_\_\_\_\_ of each type of chromosome (in homologous pair – carry the same trait)
* **Haploid (n)** –\_\_\_\_\_\_\_\_ of each type of chromosome

Human cells have \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ chromosomes.

Therefore, the diploid number (2n) of chromosomes in humans is \_\_\_\_\_\_. (MITOSIS)

The haploid number (n) of chromosomes in humans is \_\_\_\_\_\_.(MEOSIS)

Write 3 reasons for mitosis \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Write the main reason for meiosis \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ occurs in normal \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells (i.e. skin cells),

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_occurs in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells (i.e. sperm and egg) only.