

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Per: \_\_\_\_\_

## Mitosis/The Cell Cycle Notes

1. What two issues do cells experience as they grow too large? \_\_\_\_\_

2. List three reasons why cell would divide- \_\_\_\_\_

3. Once a cell can no longer divide, it undergoes \_\_\_\_\_.

4. The difference between The Cell Cycle and Mitosis is:

The Cell Cycle includes **all the steps** required for the entire \_\_\_\_\_ to divide (Interphase, Mitosis and Cytokinesis), while Mitosis includes the steps that are carried out for only the \_\_\_\_\_ to divide (Prophase, Metaphase, Anaphase and Telophase)

5. What are the two main stages of the Cell Cycle? \_\_\_\_\_

6. Which stage in the cell cycle is most of the time spent (and how much)? \_\_\_\_\_

7. What are the three phases of Interphase? \_\_\_\_\_

8. The three main activities occurring in **Interphase** are: \_\_\_\_\_

9. What are the four stages of **Mitosis**? \_\_\_\_\_

### Prophase:

\_\_\_\_\_ begins (cell begins to divide). Chromatin condenses and \_\_\_\_\_ become visible. Sister chromatids are held together by a \_\_\_\_\_. Nuclear \_\_\_\_\_ dissolves. \_\_\_\_\_ appear and begin to move to opposite end of the cell. \_\_\_\_\_ form between the centrioles.

### Metaphase:

\_\_\_\_\_ along the \_\_\_\_\_ of the cell and attach to the \_\_\_\_\_ at their \_\_\_\_\_ (center of chromosome).

### Anaphase:

\_\_\_\_\_ contract and \_\_\_\_\_ are pulled away from one another towards the poles or opposite ends of the cell.

### Telophase:

\_\_\_\_\_ form around the two new nuclei. Chromosomes appear as chromatin (**threads** rather than **rods**). \_\_\_\_\_ ends.

**Cytokinesis:** Cell membrane moves inward to create \_\_\_\_\_ daughter cells – each with its own nucleus containing identical chromosomes. The \_\_\_\_\_ is distributed equally between the two new cells before separation.