**CELL CYCLE: MITOSIS**

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| **WORD BANK** |
| *Anaphase**Chromatids**Chromosomes**Cytokinesis**G1* | *G2**Interphase**Metaphase**Mitosis**Prophase* | *Replicate**‘S’ for (‘synthesis’)**Spindle Fibers**Telophase* |

1. Before a cell can divide, enzymes must first \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the DNA, so there is double the amount.
2. When DNA is coiled up tightly and condensed into thick strands you can see with a microscope, they are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (you have 46 of them).
3. After they are copied, each chromosome is composed of two sister \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, joined at one point.
4. The place where the two sisters “hold hands” to join is called the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. A special organelle makes “ropes” that will pull the sisters apart … these “ropes” are known as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the division part of the cell cycle; it means “nuclear division”.
7. The longer part of the cell cycle, where the cell is NOT dividing, is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
8. The part of interphase where the cell is “chilling”, carrying on its normal functions, is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
9. The part of interphase where DNA is replicating is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
10. The part of interphase where the cell is increasing in size and *preparing* for mitotic division (after replicating its DNA) is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
11. Which phase of mitosis has the chromosomes lined up in the middle? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
12. In which phase of mitosis are sister chromatids separated and pulled to opposite poles? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
13. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the term used to describe the final separation of the cytoplasm into 2 distinct cells.
14. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the part of mitosis where chromosomes thicken, the nuclear envelope disintegrates, the centrioles start to migrate to opposite poles, and the spindle fibers begin to form.
15. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is the part of mitosis where 2 new nuclear envelopes form around identical nuclei.
16. (NOT IN WORD BANK) What are the main purposes of mitosis?

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