

CELL CYCLE WORKSHEET

Name: _____

PART A: MITOSIS Matching: match the term to the description

A. Prophase B. Interphase C. Telophase D. Metaphase E. Anaphase

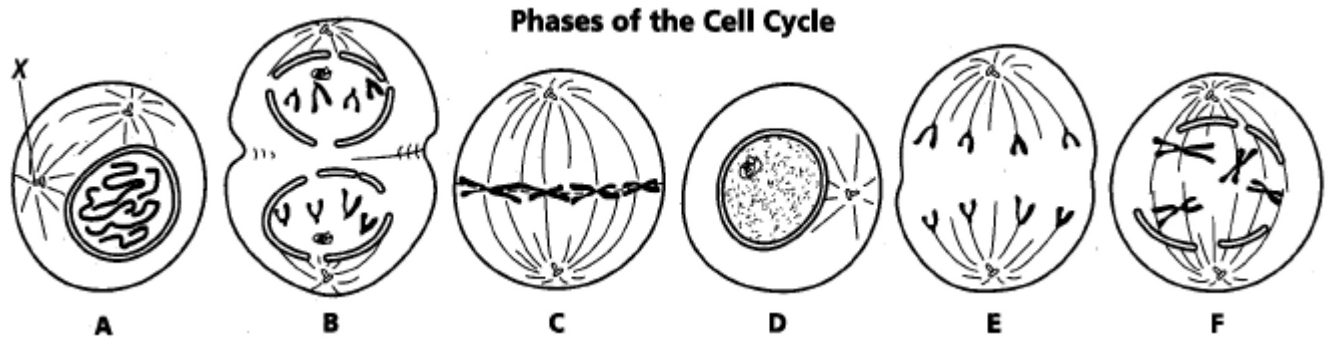
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| _____ 1. The sister chromatids are pulled apart. | _____ 8. The cleavage furrow appears. |
| _____ 2. The nuclear membrane begins to fade from view. | _____ 9. The chromosomes are moving towards the poles of the cell. |
| _____ 3. A new nuclear membrane is forming around the chromosomes. | _____ 10. The DNA is replicated. |
| _____ 4. The cell is not dividing. | _____ 11. The spindle fibers are formed. |
| _____ 5. The chromosomes become visible. | _____ 12. Chromosomes are not visible. |
| _____ 6. The chromosomes are located at the equator of the cell. | _____ 13. The phase just before cytokinesis. |
| _____ 7. The centrioles begin to fade from view. | _____ 14. Centromeres attach to spindle fibers. |

PART B: Fill in the blank: Some will be used more than once.

A. Prophase	D. Metaphase	G. Chromatid	J. Spindle fibers
B. Interphase	E. Anaphase	H. Cytokinesis	K. Cell plate
C. Telophase	F. Centromere	I. Mitosis	L. Centrioles

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|---|---|
| _____ 18. What phase are daughter cells in as a result of mitosis? | _____ 24. What structures form in prophase along which the chromosomes move? |
| _____ 19. During which phase of mitosis do centromeres divide and the chromosomes move toward their respective poles? | _____ 25. Which phase of mitosis is the last phase that chromatids are together? |
| _____ 20. What is the phase where chromatin condenses to form chromosomes? | _____ 26. Which phase of the cell cycle is characterized by a non-dividing cell? |
| _____ 21. What is the name of the structure that connects the two chromatids? | _____ 27. What structures do the spindle fibers radiate from? |
| _____ 22. In a double-stranded chromosome, what is each individual DNA molecule called? | _____ 28. What forms across the center of a plant cell during cytokinesis? |
| _____ 23. What are the three major parts of cell division? | _____ 29. The period of cell growth and development between mitotic divisions? |
| | _____ 30. What is the division of the cytoplasm and cell membrane that follows telophase? |

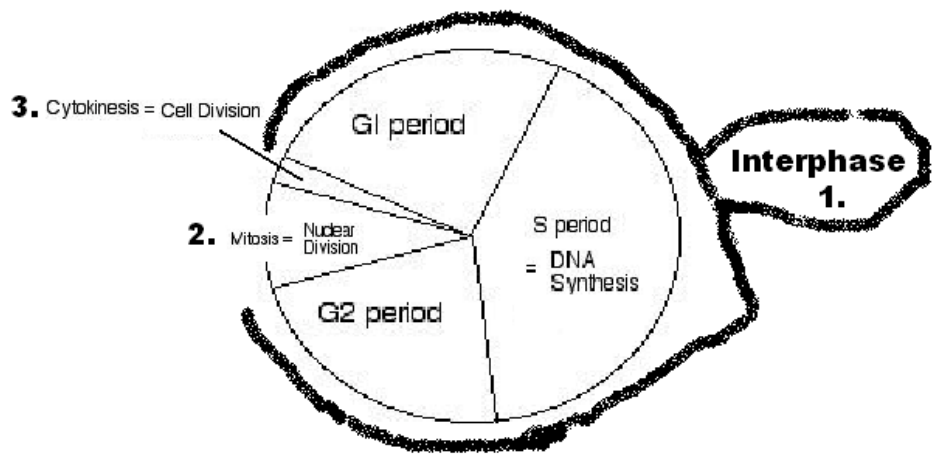
PART C: The diagram below shows six cells in various phases of the cell cycle. Note the cells are not arranged in the order in which the cell cycle occurs. Use the diagram to answer questions 1-7.



1. Cells A & F show an early and a late stage of the same phase of the cell cycle. What phase is it?

2. Which cell is in metaphase? _____
3. Which cell is in interphase? _____
4. In cell A, what structure is labeled X? _____
5. List the diagrams in order from first to last in the cell cycle. ? _____
6. Are the cells depicted plant or animal cells? _____
 A. Explain your answer. _____
 B. If it were the other type of cell what would be different in the diagrams?

7. What is the longest phase of the cell cycle? _____
8. State three reasons why mitosis is important for a healthy organism.
9. What is happening in G1 and G2?



10. Predict what would happen if cells divided uncontrollably.