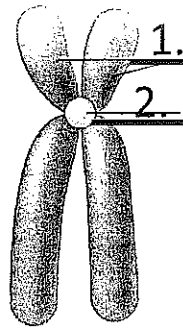


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## Unit 5: The Cell Cycle Study Guide

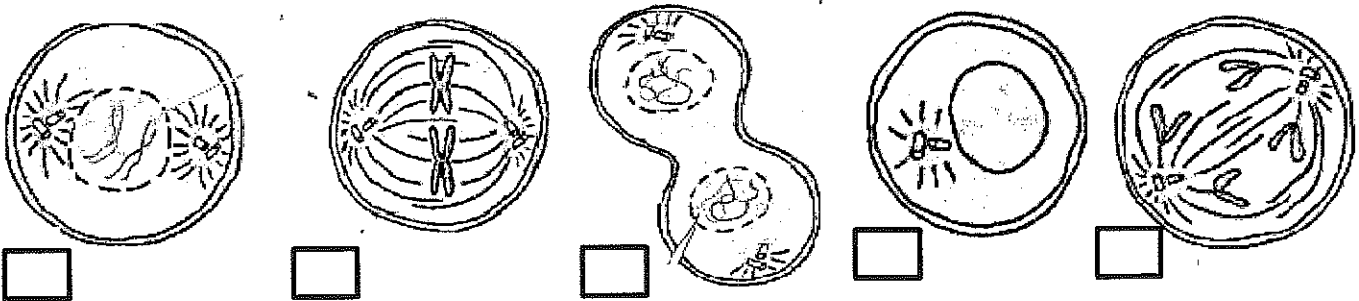
Label the drawing:



3. Chromatids are \_\_\_\_\_
4. Put the following phases of the cell cycle in the correct order: cytokinesis, G1, G2, mitosis, S  
\_\_\_\_\_
5. How many phases are in interphase? What are they called? \_\_\_\_\_
6. Exactly what happens during mitosis? \_\_\_\_\_
7. Define spindle fiber: \_\_\_\_\_
8. Match the following descriptions of the stages of mitosis to the correct name of the stage:

Prophase	Metaphase	Anaphase	Telophase
The chromosomes line up along the equator of the cell in this stage: _____	The centromeres split and the sister chromatids are pulled to opposite ends of the cell in this stage: _____	The chromatin coils into chromosomes and the nuclear envelope disappears in this stage: _____	The chromosomes uncoil and new nuclei form in this stage: _____

9. Number the pictures to show the correct order that they go through in the cell cycle:



10. What is the longest phase of the cell cycle? \_\_\_\_\_
11. What type of cells are produced by parent cells at the end of the cell cycle? (describe the chromosomes)  
\_\_\_\_\_
12. How does cytokinesis of plant cells differ from that of animal cells? \_\_\_\_\_
13. How is the cell cycle regulated? \_\_\_\_\_

14. How do normal cells become cancer cells? \_\_\_\_\_  
\_\_\_\_\_

15. What are cancer-causing agents called? \_\_\_\_\_

16. What's the difference between a benign and malignant tumor? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

17. How do cells differentiate, if all cells in a multicellular organism have the same DNA?  
\_\_\_\_\_  
\_\_\_\_\_

18. What are stem cells? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_