

Name _____

Period _____

Ms. Foglia

Date _____

AP: CHAPTER 12: CELL CYCLE

1. What is meant by the concept that cells go through a cell cycle?

2. What are the key roles of cell division?

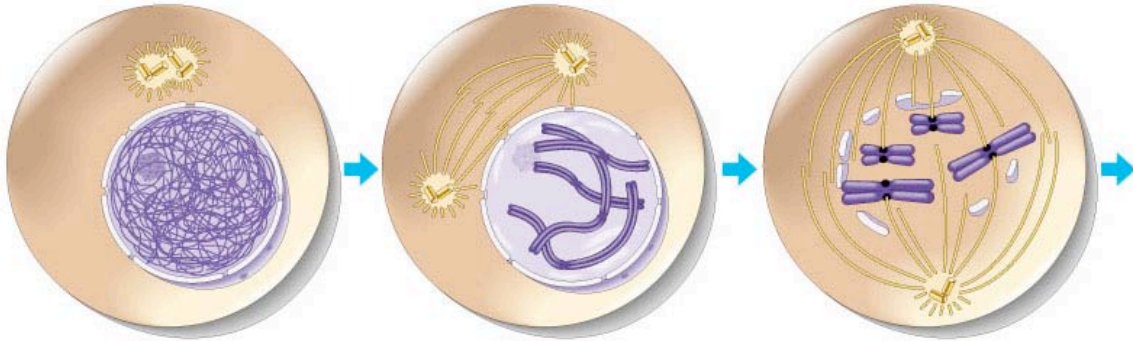
3. What is the significance of chromosome replication?

4. Sketch and label replicated chromosomes.

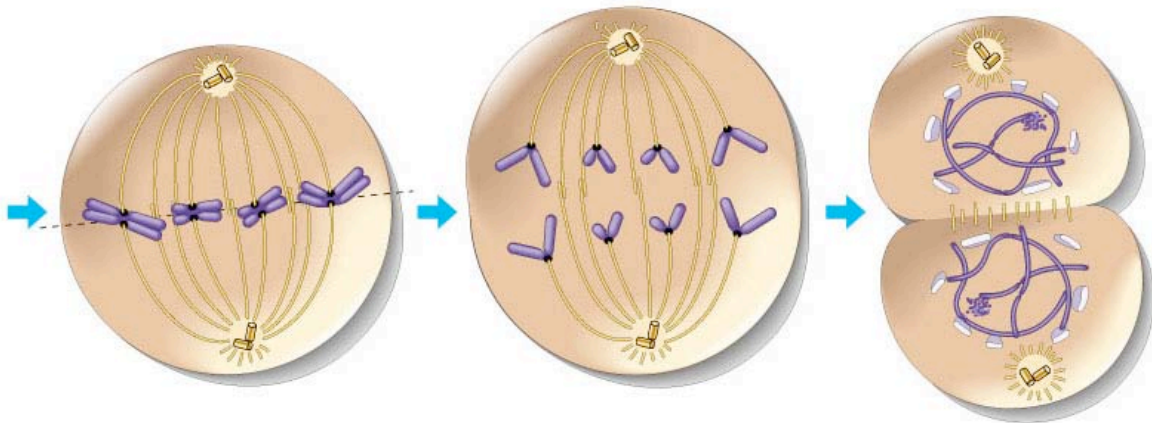
5. List the phases of the cell cycle with a brief description of what occurs in each phase.

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____

6. Label the stages and key features of each stage.



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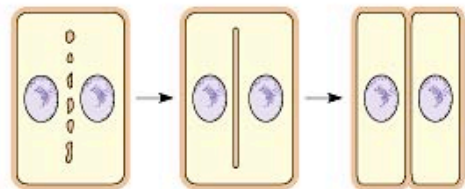
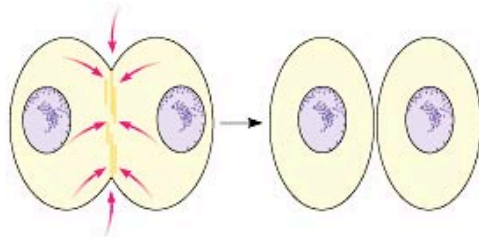
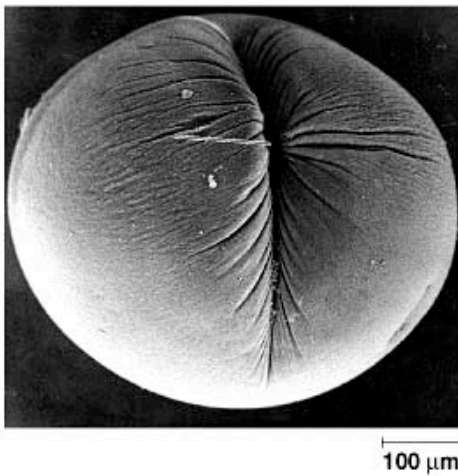


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7. How does the spindle apparatus distribute chromosomes to the daughter cells?

8. What is the role of the kinetochores and the microtubules?

9. How does cytokinesis differ in animal and plant cells? Label the diagrams below.



10. Eukaryotic mitosis is thought to have evolved from _____

11. Why is the regulation of the cell cycle critical to normal cells?

12. What is the G1 checkpoint and where does it fit into the cycle?

13. What evidence is there that regulation is chemical in nature?

14. Identify the role of the following in the cell cycle clock:

a. Kinase _____

b. Cyclin _____

c. CDKs _____

15. Describe the mechanism for regulating the passage of the cell into anaphase.

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16. Describe what triggers mitosis from G2.

17. What is the role of ubiquitin?

18. Describe a model for an external signal for growth.

19. What happens when cancer develops?

20. What is the role of p53?
