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Nombre_____

Section 10–1 Cell Growth (pages 241–243)

This section explains what problems growth causes for cells.

Limits to Cell Growth (pages 241–243)

1. What are two reasons why cells divide rather than continue to grow indefinitely?

2. What is cell division?

3. How does cell division solve the problem of increasing size?

Section 10–2 Cell Division (pages 244–249)

This section describes the main events of the cell cycle. It also explains what happens during mitosis, when cell division occurs.

Chromosomes (page 244)

4. When chromosomes become visible at the beginning of cell division, what does each chromosome consist of?

5. Each pair of chromatids is attached at an area called the

The Cell Cycle (page 245)

6. The period of growth in between cell divisions is called
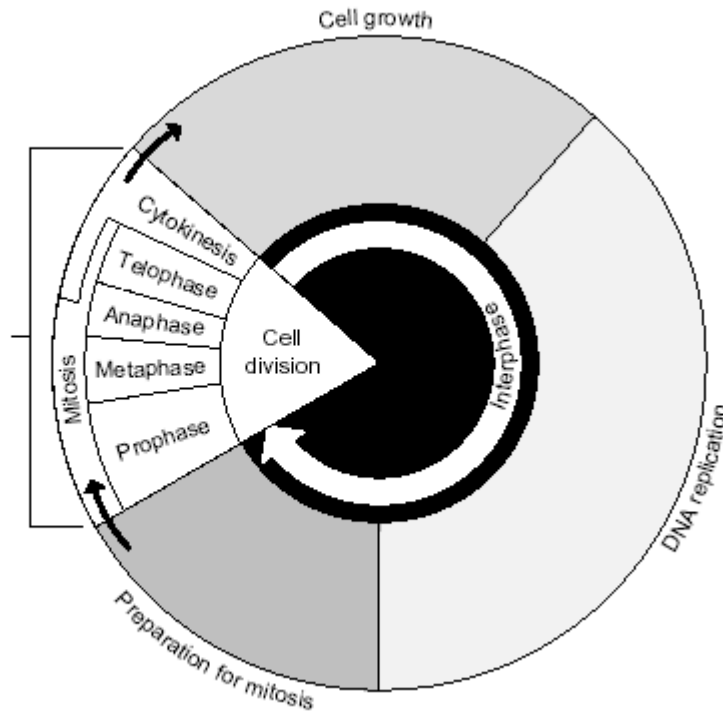
7. What is the cell cycle?

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8. Complete the diagram of the cell cycle by writing the names of each of the four phases.

Events of the Cell Cycle (page 245)
9. What happens during the G_1 phase?

10. What happens during the S phase?

11. What happens during the G_2 phase?

Mitosis (pages 246–248)
12. What are the four phases of mitosis?

13. *Match the description of the event with the phase of mitosis it is in. Each phase may be used more than once.*

| Event	Phase
The chromosomes move until they form two groups near the poles of the spindle.	**a.** Prophase
The chromosomes become visible.	**b.** Metaphase
A nuclear envelope re-forms around each cluster of chromosomes.	**c.** Anaphase
The centrioles take up positions on opposite sides of the nucleus.	**d.** Telophase
The chromosomes line up across the center of the cell.	
The nucleolus becomes visible in each daughter nucleus.	

14. Identify each of the four phases of mitosis pictured below.
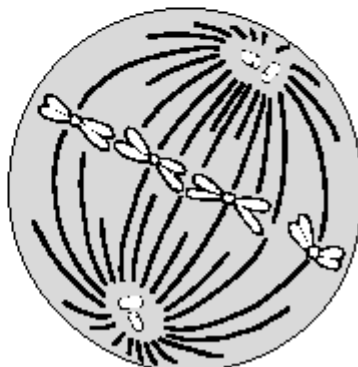
a. _____
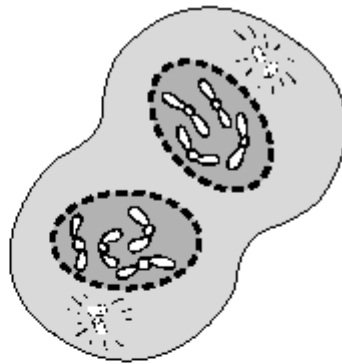
c. _____
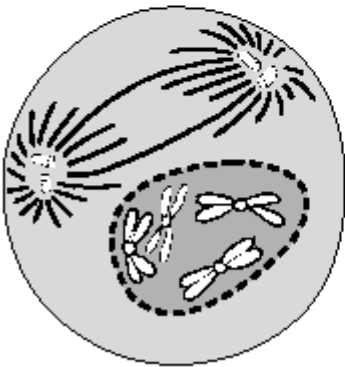
b. _____

d. _____

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Cytokinesis **(page 248)**

15. What is cytokinesis?

16. How does cytokinesis occur in most animal cells?

17. How does cytokinesis occur in plant cells?

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