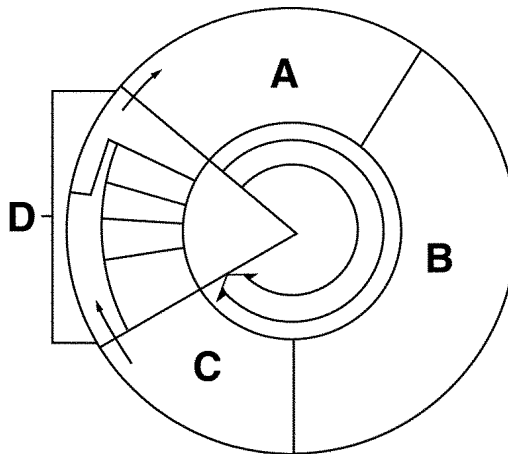


**Pre-Post Test**  
**SC.912.L.16.14 - Cell Cycle**  
**(Also assesses SC.912.L.14.3 - Cell Structure)**

**Multiple Choice:** *Identify the choice that best completes the statement or answers the question.*

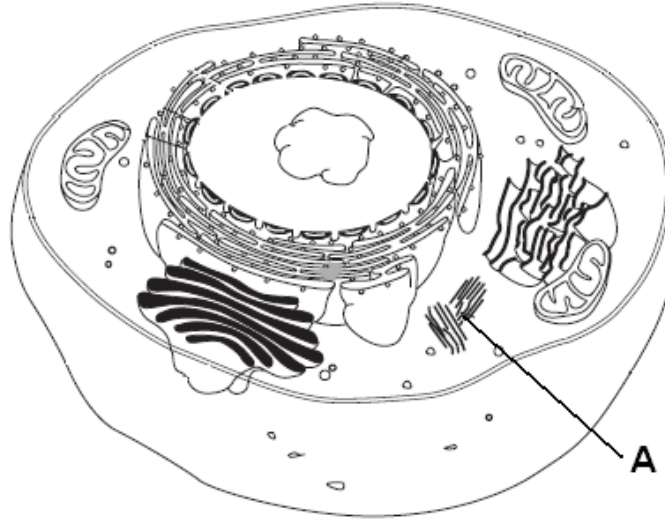
- \_\_\_\_\_ 1. When during the cell cycle are chromosomes visible?
- only during interphase
  - only when they are being replicated
  - only during cell division
  - only during the G<sub>1</sub> phase
- \_\_\_\_\_ 2. During which phase in the cell cycle does mitosis happen?
- G<sub>1</sub> phase
  - G<sub>2</sub> phase
  - M phase
  - S phase
- \_\_\_\_\_ 3. Which pair includes a phase of the cell cycle and a cellular process that occurs during that phase?
- G<sub>1</sub> phase, DNA replication
  - G<sub>2</sub> phase, preparation for mitosis
  - S phase, cell division
  - M phase, cell growth
- \_\_\_\_\_ 4. When during the cell cycle is a cell's DNA replicated?
- G<sub>1</sub> phase
  - G<sub>2</sub> phase
  - S phase
  - M phase
- \_\_\_\_\_ 5. Which of the following is a correct statement about the events of the cell cycle?
- Little happens during the G<sub>1</sub> and G<sub>2</sub> phases.
  - DNA replicates during cytokinesis.
  - The M phase is usually the longest phase.
  - Interphase consists of the G<sub>1</sub>, S, and G<sub>2</sub> phases.



**Figure 10-3**

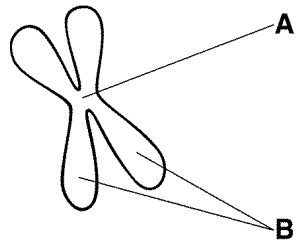
6. Cell division is represented in Figure 10-3 by the letter
- a. A.
  - b. B.
  - c. C.
  - d. D.

**Animal Cell**



**Figure 10-4**

7. In Figure 10-4, what role does structure A play in mitosis?
- a. replicate DNA
  - b. increase cell volume
  - c. connect to spindle fibers
  - d. dissolve nuclear envelope



**Figure 10-5**

8. The structure labeled A in Figure 10-5 is called the
- a. centromere.
  - b. centriole.
  - c. sister chromatid.
  - d. spindle.

- \_\_\_ 9. The structures labeled B in Figure 10–5 are called
- centromeres.
  - centrioles.
  - sister chromatids.
  - spindles.
- \_\_\_ 10. During which phase(s) of mitosis are structures like the one shown in Figure 10–5 visible?
- anaphase only
  - prophase, metaphase, and anaphase
  - metaphase only
  - anaphase and interphase
- \_\_\_ 11. During which phase of mitosis do the chromosomes line up along the middle of the dividing cell?
- prophase
  - telophase
  - metaphase
  - anaphase
- \_\_\_ 12. Which of the following represents the phases of mitosis in their proper sequence?
- prophase, metaphase, anaphase, telophase
  - interphase, prophase, metaphase, anaphase, telophase
  - interphase, prophase, metaphase, telophase
  - prophase, anaphase, metaphase, telophase
- \_\_\_ 13. What is the role of the spindle fibers during mitosis?
- They help separate the chromosomes.
  - They break down the nuclear membrane.
  - They duplicate the DNA.
  - They make the chromosomes visible.
- \_\_\_ 14. During normal mitotic cell division, a parent cell that has four chromosomes will produce two daughter cells, each containing
- two chromosomes.
  - four chromosomes.
  - eight chromosomes.
  - sixteen chromosomes.
- \_\_\_ 15. One difference between cell division in plant cells and in animal cells is that plant cells have
- centrioles.
  - centromeres.
  - a cell plate.
  - chromatin.

## SC.912.L.16.14 Pre/Post Test Answer Section

### MULTIPLE CHOICE

- ANS: C                   PTS: 1                   DIF: L2                   REF: p. 282  
OBJ: 10.2.2 Name the main events of the cell cycle.                   STA: SC.912.L.16.14  
TOP: Foundation Edition                   MSC: analysis
- ANS: C                   PTS: 1                   DIF: L1                   REF: p. 282  
OBJ: 10.2.2 Name the main events of the cell cycle.                   STA: SC.912.L.16.14  
TOP: Foundation Edition                   MSC: knowledge
- ANS: B                   PTS: 1                   DIF: L2                   REF: p. 281  
OBJ: 10.2.2 Name the main events of the cell cycle.                   STA: SC.912.L.16.14  
TOP: Foundation Edition                   MSC: analysis
- ANS: C                   PTS: 1                   DIF: L1                   REF: p. 281  
OBJ: 10.2.2 Name the main events of the cell cycle.                   STA: SC.912.L.16.14  
TOP: Foundation Edition                   MSC: knowledge
- ANS: D                   PTS: 1                   DIF: L2                   REF: p. 281  
OBJ: 10.2.2 Name the main events of the cell cycle.                   STA: SC.912.L.16.14  
TOP: Foundation Edition                   MSC: analysis
- ANS: D                   PTS: 1                   DIF: L1                   REF: p. 281  
OBJ: 10.2.2 Name the main events of the cell cycle.                   STA: SC.912.L.16.14  
TOP: Foundation Edition                   MSC: knowledge
- ANS: C                   PTS: 1                   DIF: L2                   REF: p. 282  
OBJ: 10.2.3 Describe what happens during the four phases of mitosis.  
STA: SC.912.L.16.14                   MSC: application
- ANS: A                   PTS: 1                   DIF: L1                   REF: p. 282  
OBJ: 10.2.3 Describe what happens during the four phases of mitosis.  
STA: SC.912.L.16.14                   TOP: Foundation Edition  
MSC: knowledge
- ANS: C                   PTS: 1                   DIF: L1                   REF: p. 282  
OBJ: 10.2.3 Describe what happens during the four phases of mitosis.  
STA: SC.912.L.16.14                   TOP: Foundation Edition  
MSC: knowledge
- ANS: B                   PTS: 1                   DIF: L2                   REF: p. 282 | p. 283  
OBJ: 10.2.3 Describe what happens during the four phases of mitosis.  
STA: SC.912.L.16.14                   TOP: Foundation Edition  
MSC: analysis
- ANS: C                   PTS: 1                   DIF: L2                   REF: p. 282  
OBJ: 10.2.3 Describe what happens during the four phases of mitosis.  
STA: SC.912.L.16.14                   TOP: Foundation Edition  
MSC: comprehension
- ANS: A                   PTS: 1                   DIF: L2                   REF: p. 282 | p. 283  
OBJ: 10.2.3 Describe what happens during the four phases of mitosis.  
STA: SC.912.L.16.14                   TOP: Foundation Edition  
MSC: analysis
- ANS: A                   PTS: 1                   DIF: L2                   REF: p. 282  
OBJ: 10.2.3 Describe what happens during the four phases of mitosis.

- STA: SC.912.L.16.14                      MSC: application
14. ANS: B                      PTS: 1                      DIF: L3                      REF: p. 279 | p. 280  
OBJ: 10.2.3 Describe what happens during the four phases of mitosis.  
STA: SC.912.L.16.14                      TOP: Foundation Edition  
MSC: application
15. ANS: C                      PTS: 1                      DIF: L3                      REF: p. 284  
OBJ: 10.2.4 Describe the process of cytokinesis.                      STA: SC.912.L.14.3 | SC.912.L.16.14  
TOP: Foundation Edition                      MSC: synthesis