Name _____ Class _____ Date _____

Skills Worksheet

Directed Reading

Also page 132
Section Review #1-4

Section: Mitosis and Cytokinesis

Read each question, and write your answer in the space provided.

1. What function do spindles perform during mitosis?

_____

2. What function do centrioles perform in animal cell mitosis?

_____

In the space provided, write the letter of the description that best matches the term or phrase.

_____ 3. prophase

_____ 4. telophase

_____ 5. metaphase

_____ 6. anaphase

a. Chromosomes move to the center of the cell and line up along the equator.

b. A nuclear envelope forms around the chromatids at each pole.

c. Chromosomes coil up and become visible.

d. The two chromatids move toward opposite poles as the spindle fibers attached to them shorten.

Study the following steps of mitosis. Determine the order in which the steps take place. Write the number of each step in the space provided.

_____ 7. prophase

_____ 8. telophase

_____ 9. metaphase

_____ 10. anaphase

Complete each statement by underlining the correct term or phrase in the brackets.

11. Cytokinesis begins [before / after] mitosis.

12. During cytokinesis in animal cells, the cell is pinched in half by [the cell wall / a belt of proteins].

Name _____ Class _____ Date _____

Skills Worksheet

Active Reading

Section: Mitosis and Cytokinesis

Read the passage below. Then answer the questions that follow.

During cytokinesis, the cytoplasm of the cell is divided in half, and the cell membrane grows to enclose each cell, forming two separate cells as a result.

During cytokinesis in animal cells and other cells that lack cell walls, the cell is pinched in half by a belt of protein threads.

Plant cells and other cells that have rigid cell walls have different method of dividing the cytoplasm. In plant cells, vesicles formed by the Golgi apparatus fuse at the midline of the dividing cell and form a cell plate. A cell plate is a membrane-bound cell wall that forms across the middle of the cell. A new cell wall then forms on both sides of the cell plate.

SKILL: READING EFFECTIVELY

In the space provided, match each statement with the stage of cellular division it describes. Write a if the statement describes cytokinesis in animal cells, write p if it describes cytokinesis in plant cells, or write b if it describes cytokinesis in both.

_____ **1.** The Golgi apparatus forms vesicles.

_____ **2.** Two genetically identical cells are formed.

_____ **3.** A belt of protein thread pinches the cell in half.

_____ **4.** A cell plate forms across the cell's middle.

_____ **5.** The cytoplasm of the cell divides in half.

_____ **6.** A cell wall forms on both sides of cell plate.

An analogy is a comparison. In the space provided, write the letter of the term or phrase that best completes the analogy.

_____ **7.** Plant cell is to cell plate as animal cell is to

a. nucleus.
b. cytoplasm.
c. protein threads.
d. Both (a) and (b)