Name _____ Date _____ Class _____

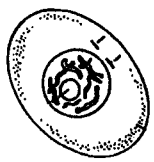
CHAPTER 8

Cell Reproduction | Reteaching

The Life of a Cell

Each of the paragraphs below describes a phase in the life of a living cell as shown by the accompanying illustration. Answer the questions or fill in the blanks as indicated to form a complete story of the phases in the life of a cell.

Interphase



Most of the life of a cell is spent between cell divisions. This period is known as **interphase.** During this period, the cell grows to about double the size it was as a result of the previous cell division. Toward the end of this phase, the cell prepares for cell division. What must happen to the DNA strands in the nucleus before the cell can divide? Why?

_____

_____

_____

_____

Mitosis

The process of mitosis consists of a series of events that take place in a cell before the cell actually divides into two separate parts. Biologists distinguish four main phases within this process: **prophase, metaphase, anaphase,** and **telophase.**

PHASE 1: _____

During this phase, the chromosomes become thick rodlike structures.

The _____ _____breaks up.

A network of protein cables called _____ begins to form. Eventually this network stretches from one end of the cell to the other.

PHASE 2: _____

During this phase, the chromosomes get arranged in a certain way. Describe this arrangement.

_____

_____

_____

_____

PHASE 3: _____

Describe what happens to the chromosomes during this phase.

_____

_____

_____

What happens to the spindle fibers?

_____

_____

_____

PHASE 4: _____

As a result of the three previous phases, each side of the cell now has a complete _____ of _____. A nuclear _____ forms around each set. The chromosomes _____. The spindle fibers disappear.

Cytokinesis

In the last step of cell division, the _____ is pinched in half to form two _____ cells. Describe what has been accomplished during cell division. _____

_____

_____

How does the process continue?

_____

_____

_____

_____