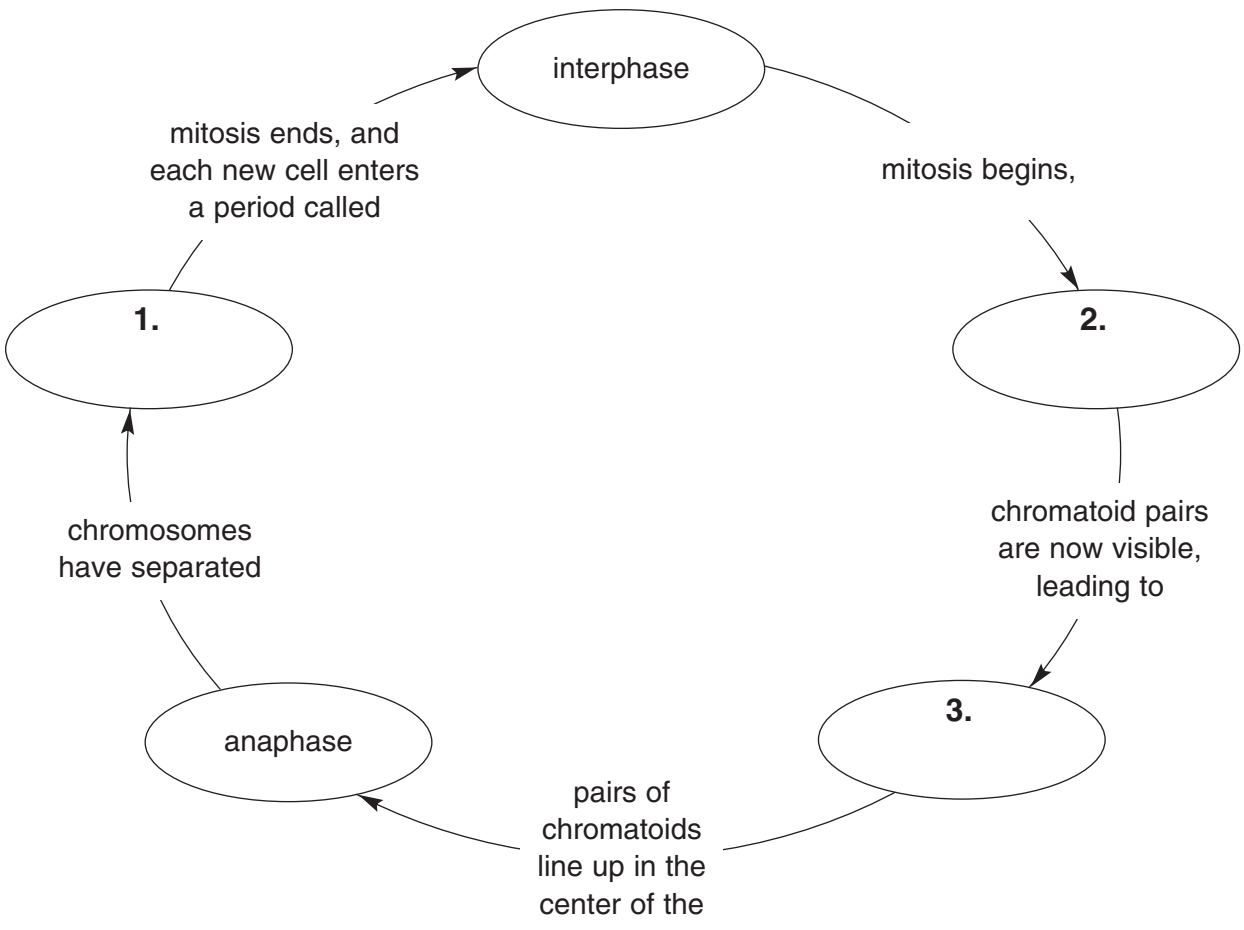
Directed Reading for Content Mastery

Overview Cell Reproduction

Chapter 12

Directions: *Complete the concept map using the terms in the list below.*

metaphase **telophase** **prophase**



Directions: *Use the five terms in the concept map to identify the steps of mitosis below.*

Description	Step of Mitosis
4. Spindle fibers start to disappear, nuclear membrane forms, and cytoplasm begins to divide.	_____
5. Chromatid pairs are fully visible, the nucleolus and the nuclear membrane disintegrate, and spindle fibers begin to form.	_____
6. Chromatid pairs line up across center of cell, the centromere of each pair attaches to spindle fibers.	_____
7. Each chromatid pair splits at the centromere and separates to opposite ends of the cell, where they become identical chromosomes.	_____
8. Cell grows and makes copies of its hereditary material.	_____

Meeting Individual Needs

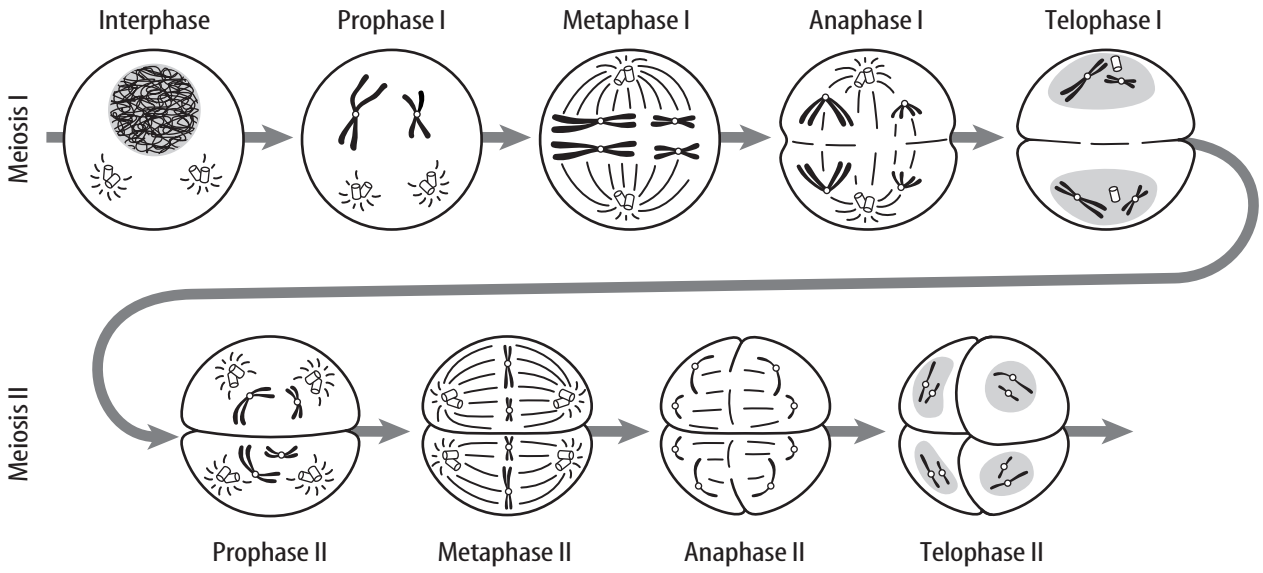
Name Date Class

Directed Reading for Content Mastery

Section 1 ▪ Cell Division and Mitosis
Section 2 ▪ Sexual Reproduction and Meiosis

Chapter 12

Directions: *Study the diagram. Then answer the following questions.*



1. Mitosis begins with one cell. How many cells are formed by the end of mitosis? _____

2. What happens to the chromosomes of a cell in order for mitosis to begin? During what part of the cell cycle does this occur?

_____

3. Meiosis I is the same as what other reproductive process?

_____

4. Meiosis I begins with one cell. How many cells are formed by the end of meiosis II?

_____

5. At the end of meiosis II, each of the haploid sex cells has only half the number of chromosomes as the original diploid cell. Why is this important?

_____

_____