Chapter 11 Introduction to Genetics

Reviewing Key Concepts

Identifying Processes On the lines provided, order the different stages of meiosis I and meiosis II in the proper sequence.

- ___ 1. chromosome pairs line up in the center of the cell
 - 2. spindle fibers pull homologous pairs to ends of the cell
 - 3. 4 haploid (N) daughter cells form
 - 4. cells undergo a round of DNA replication
- _ 5. sister chromatids separate from each other
 - **6.** chromosomes form tetrads
 - 7. 2 haploid (N) daughter cells form
 - **8.** spindle fibers attach to the homologous chromosome pairs
- **9.** individual chromatids move to each end of the cell
- ______ **10.** crossing-over (if any) occurs

Short Answer *On the lines provided, answer the following questions.*

- **11.** Compare the number and type of cells that result from meiosis and mitosis.
- **12.** How do the genetic contents of cells resulting from mitosis and meiosis differ?

Reviewing Key Skills

- **13. Comparing and Contrasting** Describe a similarity and a difference between meiosis I and meiosis II.
- **14. Comparing and Contrasting** How is the formation of gametes in males similar to the formation of gametes in females? How is it different?
- **15. Applying Concepts** If a diploid cell containing 28 chromosomes undergoes meiosis, how many chromosomes will each daughter cell have?