



Name \_\_\_\_\_

Period \_\_\_\_\_

Date \_\_\_\_\_

SECTION

6.1

CHROMOSOMES AND MEIOSIS

## Reading Guide

### KEY CONCEPT

**Gametes have half the number of chromosomes that body cells have.**

### VOCABULARY

somatic cell

gamete

homologous chromosome

autosome

sex chromosome

sexual reproduction

fertilization

diploid

haploid

meiosis

**MAIN IDEA: You have body cells and gametes.**

1. What are the two major groups of cell types in the human body?

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2. Where are gametes located?

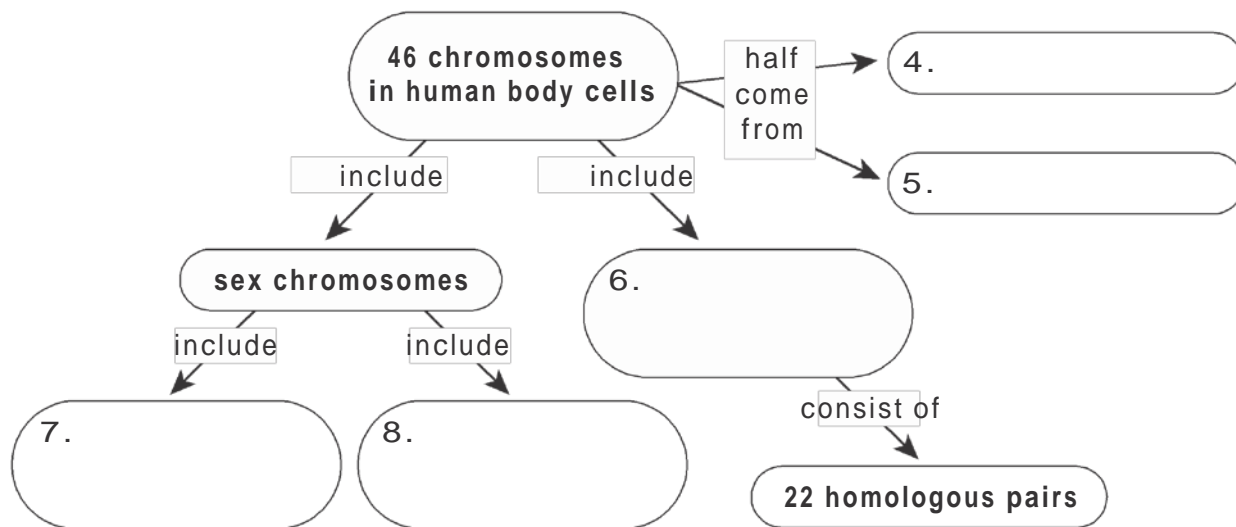
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3. How many chromosomes are in a typical human body cell?

\_\_\_\_\_

**MAIN IDEA: Your cells have autosomes and sex chromosomes.**

Fill in the concept map below to summarize what you know about chromosomes.



## READING GUIDE, CONTINUED

9. What is the sex of a person with two X chromosomes?

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10. Which chromosome carries the fewest number of genes?

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**MAIN IDEA: Body cells are diploid; gametes are haploid.**

11. What happens to the nuclei of the egg and sperm during fertilization?

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12. What type of cells are haploid?

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13. What is the haploid chromosome number in humans?

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14. How many autosomes are present in each human gamete? How many sex chromosomes?

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15. Complete the following table to summarize the differences between mitosis and meiosis. Use Figure 6.2 to help you.

Mitosis	Meiosis
Makes diploid cells	
	Makes genetically unique cells
Happens throughout lifetime	
	Involved in sexual reproduction

**Vocabulary Check**

16. What are homologous chromosomes?

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17. The word *soma* means “body.” How does this relate to the meanings of *autosome* and *somatic cell*?

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