

KEY CONCEPT

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

VOCABULARY

somatic cell	autosome	fertilization
gamete	sex chromosome	diploid
homologous chromosome	sexual reproduction	haploid
		meiosis

MAIN IDEA: You have body cells and gametes.

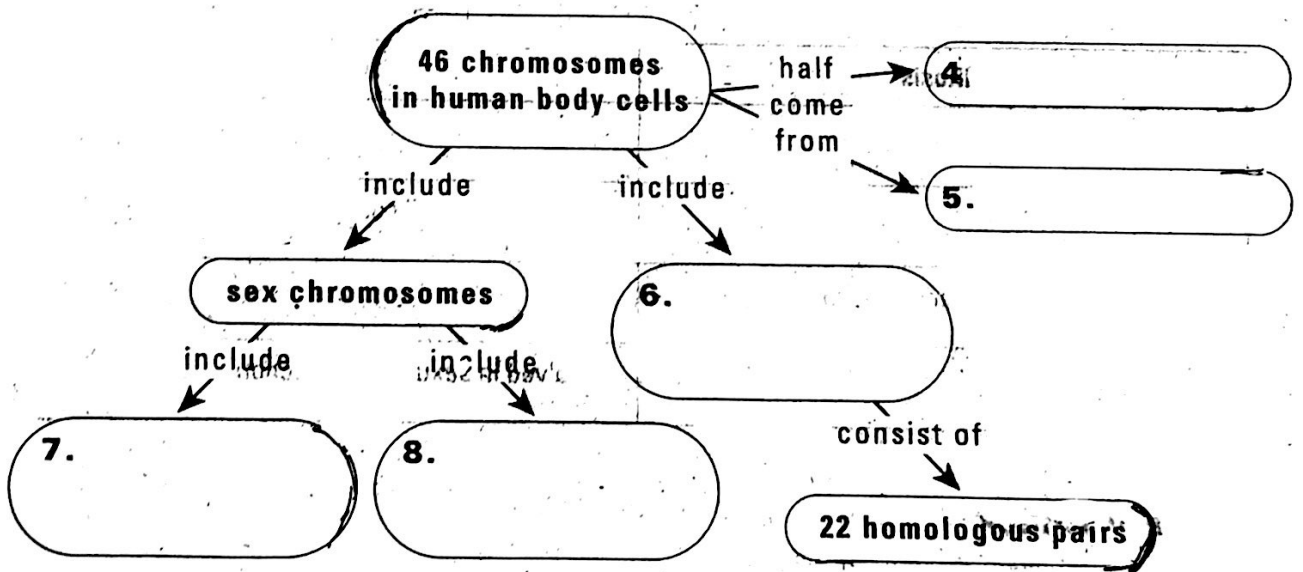
1. What are the two major groups of cell types in the human body?

2. Where are gametes located?

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.



Section 6.1 STUDY GUIDE CONTINUED

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

10. Which chromosome carries the fewest number of genes?

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

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

12. What type of cells are haploid?

13. What is the haploid chromosome number in humans?

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

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?

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