

Name \_\_\_\_\_

Date \_\_\_\_\_

## Study Guide 6.1: Chromosomes and Meiosis

### 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?

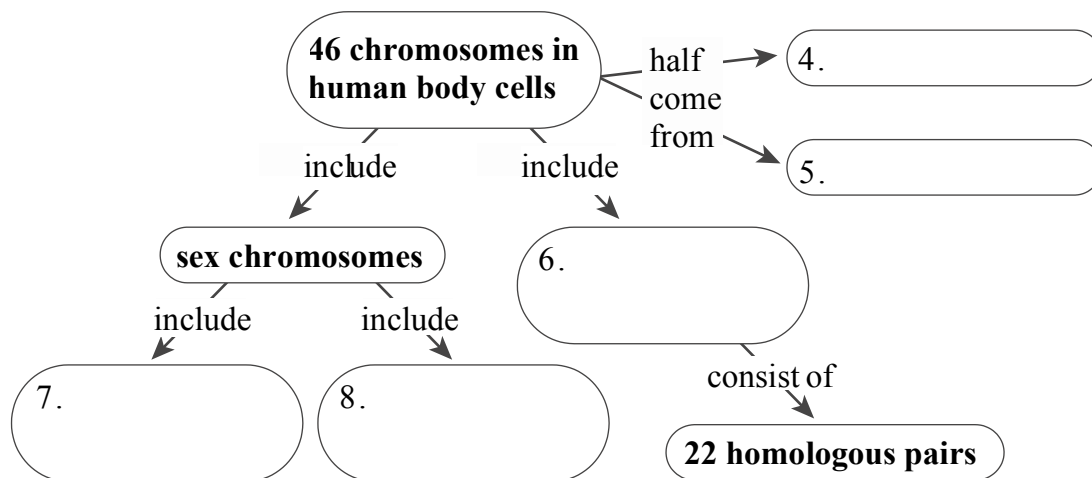
\_\_\_\_\_

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.



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.

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*?

---