



Name

Period

Date

SECTION  
**7.4**

HUMAN GENETICS AND PEDIGREES

**Study Guide**

**KEY CONCEPT**

A combination of methods is used to study human genetics.

**VOCABULARY**

pedigree  
karyotype

**MAIN IDEA:** Human genetics follows the patterns seen in other organisms.

1. How does genetic inheritance follow similar patterns in all sexually reproducing organisms?

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2. How are single-gene traits useful in studying human genetics?

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**MAIN IDEA:** Females can carry sex-linked genetic disorders.

3. Who can be carriers of autosomal disorders?

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4. Why can females, but not males, be carriers of sex-linked genetic disorders?

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**MAIN IDEA:** A pedigree is a chart for tracing genes in a family.

5. What is a pedigree?

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6. How are phenotypes used in pedigree analysis?

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7. What information on a pedigree can tell you whether a gene is on an autosome or on a sex chromosome?

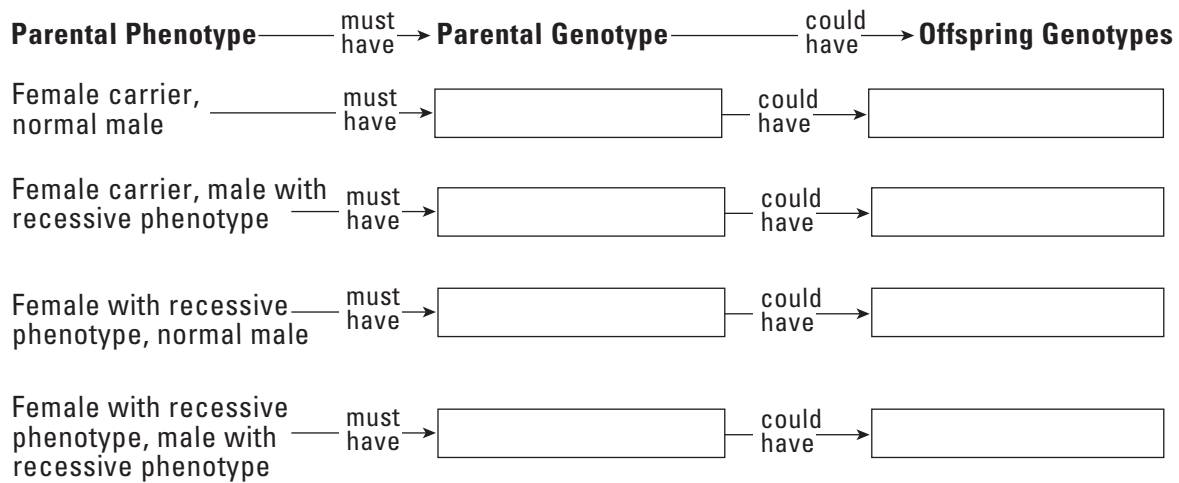
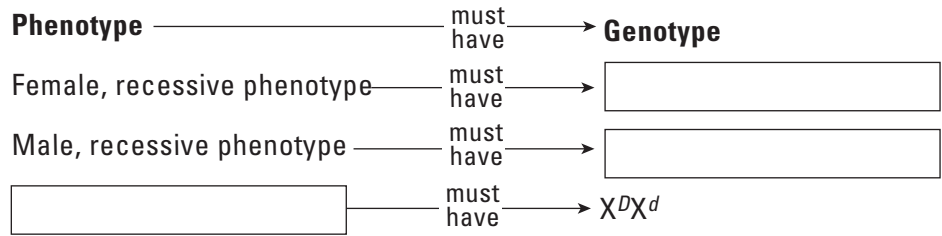
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Extending Mendelian Genetics  
CHAPTER 7

## Section 7.4 STUDY GUIDE CONTINUED

8. Complete the chart to follow the logic necessary to fill out a pedigree for a sex-linked gene. Use  $X^D$  and  $X^d$  for the dominant and recessive X-linked genes, respectively.

**Tracing Sex-Linked Genes****MAIN IDEA:** Several methods help map human chromosomes.

9. What are two methods that are used to directly study human chromosomes?

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10. What does a karyotype show about chromosomes?

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**Vocabulary Check**

11. What is a karyotype?

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