

Chapter 12

Patterns of Heredity and Human Genetics

Reinforcement and Study Guide

Section 12.1 Mendelian Inheritance of Human Traits

In your textbook, read about making a pedigree.

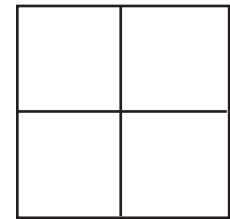
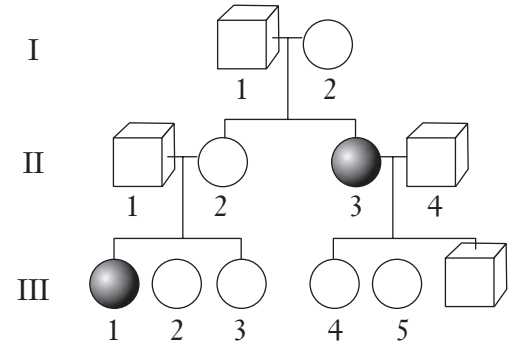
Examine the pedigree to the right. Then answer the following questions.

1. Is the trait being studied in the pedigree recessive or dominant? How do you know?

2. Are II-1 and II-2 carriers of the trait? How do you know?

3. What is the probability that II-1 and II-2 will produce an individual with the trait being studied? Draw a Punnett square to show your work.

4. What is the likely genotype of II-4 for the trait being studied in the pedigree?



In your textbook, read about simple recessive heredity and simple dominant heredity.

For each item in Column A, write the letter of the matching item from Column B.

Column A

- _____ 5. Recessive disorder that results from the absence of an enzyme required to break lipids down
- _____ 6. Lethal genetic disorder caused by a dominant allele
- _____ 7. Most common genetic disorder among white Americans
- _____ 8. Recessive disorder that results from the absence of an enzyme that converts one amino acid into another one
- _____ 9. Tongue curling and Hapsburg lip

Column B

- a. cystic fibrosis
- b. simple dominant traits
- c. Tay-Sachs disease
- d. Huntington's disease
- e. phenylketonuria