

Genetics

More About Traits & Genetic Variation

Use Chapter 6, Section 2 to answer the questions below.

More About Traits (p.184) One Gene, Many Traits

1. In Mendel's studies, how many genes controlled a particular trait? _____
2. Look at Figure 5. For the tiger, one gene controls both _____ color and _____ color.
3. Sickle-cell anemia, shown in Figure 6, is a genetic _____ .
4. Some genetic disorders, like sickle-cell anemia, can be caused by an error on an _____ of a single gene.



Many Genes, One Trait (p.185)

- _____ 5. What causes the many shades of a single human eye color?
 - a. one gene acting alone
 - b. one gene from each parent
 - c. two genes from each parent
 - d. several genes acting together
6. Multiple genes can affect _____ traits, like how your body breaks down food.

The Importance of Environment (p.185)

- _____ 7. What is one example of an internal environmental condition that influences height?
 - a. heavy clothing
 - b. nutrition
 - c. geography
 - d. exposure to sunlight
- _____ 8. Look at Figure 8. Why are the grasshoppers different colors?
 - a. they are different species
 - b. one is male and the other is female
 - c. they ate different food when they were young
 - d. the genes that control their coloring are different

Genetic Variation (p.186)

9. Scientists estimate humans have approximately _____ genes.
10. People do not look identical to each other because they have different sets of _____ .
11. _____ is the differences in sets of alleles between individuals in a population.
12. Look at Figure 9. Genetic variation has caused the snakes to be different _____ .
- _____ 13. What kind of traits do genes affect?
 - a. traits caused by the environment
 - b. only traits you can't see
 - c. traits you can see and traits you can't see
 - d. only traits you can see