

## 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. Look at Figure 6. Sickle-cell anemia 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

- \_\_\_\_\_ 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

- \_\_\_\_\_ 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

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