

## Modern Genetics ▪ Chapter 6 Pre-Assessment

Write the letter of the correct answer on the line at the left.

- \_\_\_\_\_ 1. From each parent, offspring inherit
  - a. half their phenotypes.
  - b. half their cells.
  - c. half their genes.
  - d. half their proteins.
- \_\_\_\_\_ 2. Plant and animal cells typically have
  - a. three copies of every gene.
  - b. two copies of every gene.
  - c. varying copies of every gene.
  - d. one copy of every gene.
- \_\_\_\_\_ 3. The genetic material of plants and animals is
  - a. cytoplasm.
  - b. mitochondria.
  - c. chromosomes.
  - d. DNA.
- \_\_\_\_\_ 4. The chromosomes of each cell in an organism are where
  - a. DNA is located.
  - b. sexual reproduction occurs.
  - c. proteins are produced.
  - d. photosynthesis takes place.

Name \_\_\_\_\_ Date \_\_\_\_\_ Class \_\_\_\_\_

## Modern Genetics ▪ Section 6.1 Quiz

If the statement is true write true. If the statement is false, change the underlined word or words to make the statement true.

- \_\_\_\_\_ 1. A number of human traits, such as a widow's peak, are controlled by a single gene with multiple alleles and have two distinctly different phenotypes.
- \_\_\_\_\_ 2. Even though a gene may have multiple alleles, a person can carry only one of those alleles.
- \_\_\_\_\_ 3. Some human traits show a large number of phenotypes because the traits are controlled by many genes.
- \_\_\_\_\_ 4. Unlike most chromosome pairs, the X and Y chromosomes have the same genes.
- \_\_\_\_\_ 5. An interaction between genes and environment determines many of a person's characteristics.

**Modern Genetics** ▪ *Section 6.2 Quiz*

*Fill in the blank to complete each statement.*

1. Some genetic disorders are caused by changes in DNA. Other disorders are caused by changes in \_\_\_\_\_ of chromosomes.
2. Cystic fibrosis, sickle-cell disease, hemophilia, and Down syndrome are examples of \_\_\_\_\_.
3. Geneticists use pedigrees to trace the inheritance of \_\_\_\_\_.
4. A doctor can use a \_\_\_\_\_ to examine the number of chromosomes in a person's cells.
5. The tools genetic counselors use in their work include \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

**Modern Genetics** ▪ *Section 6.3 Quiz*

*Fill in the blank to complete each statement.*

1. Two \_\_\_\_\_ techniques are hybridization and inbreeding.
2. \_\_\_\_\_ an animal involves taking the nucleus of an animal's body cell and using that nucleus to produce a new animal.
3. The main goal of the Human Genome Project has been to \_\_\_\_\_ of every gene in the human genome.
4. Scientists can use nuclear and mitochondrial \_\_\_\_\_ to determine a person's identity.
5. \_\_\_\_\_ will involve inserting copies of a gene directly into a person's cells to correct some genetic disorders.