Genetics: The Science of Heredity

Multiple Choice

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

____ 1. The cytoplasm is the part of the cell in which
- a. DNA is located.
- b. proteins are made.
- c. chromosomes are located.
- d. RNA is made.

____ 2. A mutation that causes antibiotic resistance in bacteria is a(n)
- a. mutation that harms the bacteria.
- b. neutral mutation.
- c. mutation that helps the bacteria.
- d. environmental mutation.

____ 3. The process by which the number of chromosomes is reduced by half to form sex cells is
- a. protein synthesis.
- b. heredity.
- c. meiosis.
- d. probability.

____ 4. In the first step of protein synthesis,
- a. messenger RNA attaches to a ribosome.
- b. messenger RNA is made using DNA as the pattern.
- c. the ribosome releases the completed protein chain.
- d. transfer RNA carries a specific amino acid to the ribosome.

____ 5. Gregor Mendel's work was the foundation for understanding why
- a. the results of one genetic cross do not affect the outcome of a second cross.
- b. sex cells have half the number of chromosomes as body cells.
- c. protein synthesis occurs in the cytoplasm.
- d. offspring have traits similar to those of their parents.

____ 6. In the genetic code, a group of three nitrogen bases codes for a specific
- a. messenger RNA.
- b. hybrid.
- c. chromosome.
- d. amino acid.

____ 7. For codominant traits, heterozygous organisms have a phenotype that shows
- a. both alleles.
- b. only the recessive allele.
- c. neither the dominant nor the recessive allele.
- d. only the dominant allele.