Section 13.3 The Human Genome

In your textbook, read about mapping and sequencing the human genome and applications of the Human Genome Project.

Determine if the statement is true. If it is not, rewrite the italicized part to make it true.

1. The human genome consists of approximately *1000* genes located on 46 chromosomes.

2. Scientists *have* determined the exact chromosomal location of all genes.

3. The genetic map that shows the location of genes on a chromosome is called a *pedigree map*.

4. Instead of examining actual offspring, scientists examine *egg* cells to create linkage maps.

5. Gene therapy is being performed on patients suffering from *sickle-cell anemia*.

6. *Electrolysis* can be used to separate DNA fragments.

Answer the following questions.

7. What is the Human Genome Project?

8. Why is mapping by linkage data extremely inefficient in humans?

9. What are the three areas of current research that utilize chromosome maps?

10. Why is DNA fingerprinting reliable?