

Name: _____ Date: _____

Chapter 4 - Lesson 4 Genetics

Questions

1. For the DNA code shown below, answer the following questions:

GAGTTTTATATCACTTACGACTAACAGTTAACTTTTCGGACCTTCAAAAATGCTACT

- a. Which base replaces thymine in the mRNA?
 - b. Which base binds to adenine?
 - c. Which base binds to cytosine?
2. Copy the DNA code. Mark the start and stop codons into mRNA code (*Clue: use complementary bases*). Divide it into codons as you go.
- a. How many amino acids are in the protein?
 - b. Name the amino acids in the protein.
3. What is the relationship between a gene and a chromosome?
4. What is a recessive gene? Why are they sometimes undesirable?
5. Explain the differences between mitosis and meiosis. Why are they different?
6. Describe the stages of meiosis and draw them showing how the chromosomes are moved into different cells.
7. How do dairy and beef producers use genetics to help improve production and profitability?
8. Why is genetics important to veterinarians?