



NAME \_\_\_\_\_

PERIOD \_\_\_\_\_ COOK

## EVOLUTION I Test Review: Chapter 16

1. List four pieces of evidence that support the theory of evolution.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_
- d. \_\_\_\_\_

2. Describe Darwin's theory of common descent and give evidence that supports it.

\_\_\_\_\_  
\_\_\_\_\_

3. Describe natural selection. Make sure to include in your description the following: adaptation, fitness, survival of the fittest.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. Describe and give an example of artificial selection.

\_\_\_\_\_  
\_\_\_\_\_

5. List the three conditions necessary for natural selection to occur within a population:

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_

6. Describe what would happen to the organisms in an environment if a natural disaster caused a change in the environment.

\_\_\_\_\_  
\_\_\_\_\_

7. If two species have very similar DNA sequences, what does this mean for them evolutionarily? (How are they related?)

\_\_\_\_\_

8. Describe the relationship between fitness and adaptation.

\_\_\_\_\_  
\_\_\_\_\_



## Human Genetics Flashback

1. Muscular dystrophy is a sex-linked disorder that results in weakening and loss of skeletal muscle. One out of every 3000 males in the U.S. are born with this condition. A husband with muscular dystrophy and wife that is a carrier of the disease are ready to start a family.

What are the parents' genotypes? \_\_\_\_\_ X \_\_\_\_\_

What percentage of their children will be affected with muscular dystrophy? \_\_\_\_\_%

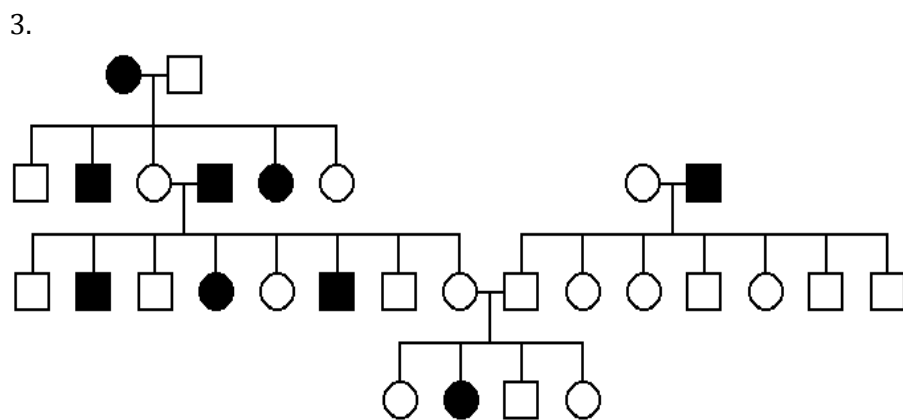
What percentage of the females will be carriers of the disease? \_\_\_\_\_%

Is muscular dystrophy (dominant or recessive)? \_\_\_\_\_ How do you know? \_\_\_\_\_


2. Cystic fibrosis is caused by a recessive gene located on chromosome 7. Individuals with cystic fibrosis produce thick mucus that clogs their lungs and makes it difficult to breath. Two individuals are heterozygous for the cystic fibrosis gene would like to start a family.

What are the parents' genotypes? \_\_\_\_\_ X \_\_\_\_\_

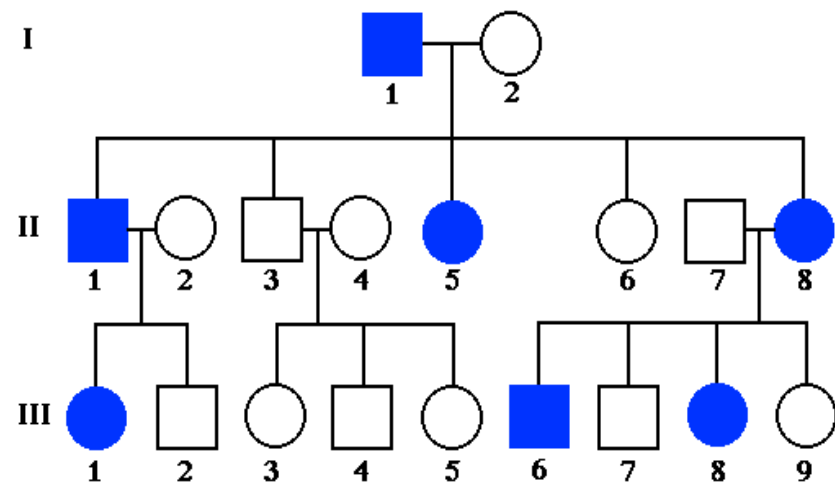
What percentage of their children will likely be affected with cystic fibrosis? \_\_\_\_\_%

a. Is the pedigree a (recessive or dominant) disorder?  
\_\_\_\_\_

b. How did you determine your answer to "a" above?  
\_\_\_\_\_

c. Is the pedigree (autosomal or sex-linked)?



4. Circle the answer.  
Is the pedigree autosomal / x-linked?

Dominant / Recessive

What is the genotype of I-1? \_\_\_\_\_

What is the genotype of III-9? \_\_\_\_\_

\_\_\_\_\_