Genetics Name:

Brainpop—Gender Determination Period:

Watch the Brainpop on gender determination, then answer the questions below. You can also check Chapter 6 of your textbook if you are getting stuck.

_____ 1. Where can you find DNA?

a. in reproductive cells only
b. in brain cells only
c. in blood cells only
d. in every cell in your body

_____ 2. What is the relationship between chromosomes and DNA?

a. DNA contains chromosomes
b. chromosomes are made out of DNA
c. each chromosome contains a small piece of a DNA molecule
d. one pair of chromosomes makes up a full DNA molecule

_____ 3. How is the 23rd pair of chromosomes different in boys than it is in girls?

a. boys are XX, girls are XY
b. boys are XX, girls are YY
c. boys are XY, girls are XX
d. boys are YY, girls are XX

_____ 4. Why do chromosomes come in pairs?

a. one pair is for the left half of your body, the other is for the right half
b. each chromosome has a backup copy
c. one of each pair comes from your mother, the other from your father
d. one chromosome contains your parents' DNA, the other contains your own DNA

_____ 5. In what crucial way are egg and sperm cells different from other cells in the body?

a. they have only half a set of chromosomes
b. they can move
c. they have a limited lifespan
d. their chromosomes do not contain DNA

_____ 6. In what way are the 23rd chromosomes of sperm and egg cells different?

a. sperm cells contain either X or Y chromosomes; egg cells contain X chromosomes only
b. sperm cells contain X chromosomes only; egg cells contain either X or Y chromosomes
c. sperm cells contain Y chromosomes only; egg cells contain either X or Y chromosomes
d. sperm cells contain either X or Y chromosomes; egg cells contain Y chromosomes only

_____ 7. What is a haploid cell?

a. a cell that determines one's gender
b. a cell that contains no DNA
c. a cell with half the normal number of chromosomes
d. a cell with double the normal number of chromosomes

_____ 8. What random factor determines a baby's gender?

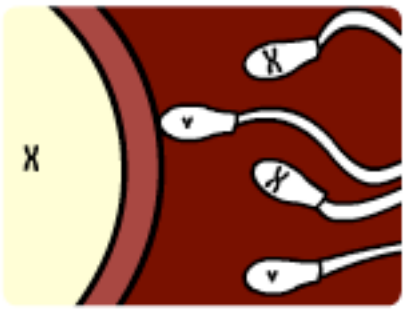
a. whether the egg contains an X or Y chromosome
b. whether the sperm contains an X or Y chromosome
c. whether the sperm is diploid or haploid
d. whether the egg is diploid or haploid

_____ 9. If a sperm with an X chromosome fertilizes an egg, what are the chances that the offspring is a girl?

a. 0% b. 25% c. 50% d. 100%

_____ 10. How are babies born with an extra X or Y chromosome different from other babies?

a. they rarely live past infancy
b. they are larger than other babies
c. they are smaller than other babies
d. they display both male and female characteristics



Look at the cartoon from the video. What does this have to do with whether the baby will be a boy or a girl?