

Genetics

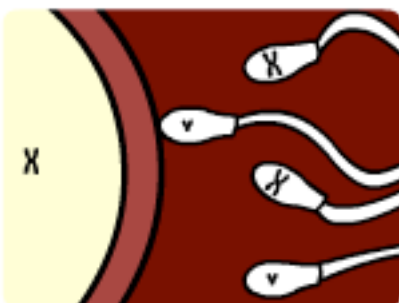
Brainpop—Gender Determination

Name:

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?
- in reproductive cells only
 - in brain cells only
 - in blood cells only
 - in every cell in your body
- _____ 2. What is the relationship between chromosomes and DNA?
- DNA contains chromosomes
 - chromosomes are made out of DNA
 - each chromosome contains a small piece of a DNA molecule
 - 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?
- boys are XX, girls are XY
 - boys are XX, girls are YY
 - boys are XY, girls are XX
 - boys are YY, girls are XX
- _____ 4. Why do chromosomes come in pairs?
- one pair is for the left half of your body, the other is for the right half
 - each chromosome has a backup copy
 - one of each pair comes from your mother, the other from your father
 - 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?
- they have only half a set of chromosomes
 - they can move
 - they have a limited lifespan
 - their chromosomes do not contain DNA
- _____ 6. In what way are the 23rd chromosomes of sperm and egg cells different?
- sperm cells contain either X or Y chromosomes; egg cells contain X chromosomes only
 - sperm cells contain X chromosomes only; egg cells contain either X or Y chromosomes
 - sperm cells contain Y chromosomes only; egg cells contain either X or Y chromosomes
 - sperm cells contain either X or Y chromosomes; egg cells contain Y chromosomes only
- _____ 7. What is a haploid cell?
- a cell that determines one's gender
 - a cell that contains no DNA
 - a cell with half the normal number of chromosomes
 - a cell with double the normal number of chromosomes
- _____ 8. What random factor determines a baby's gender?
- whether the egg contains an X or Y chromosome
 - whether the sperm contains an X or Y chromosome
 - whether the sperm is diploid or haploid
 - 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?
- they rarely live past infancy
 - they are larger than other babies
 - they are smaller than other babies
 - 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?