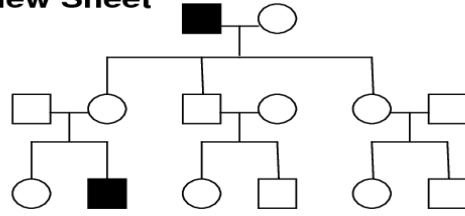


Level Biology Final Exam Review Sheet

Genetics Pedigree: Hemophilia

Normal = Dominant
Hemophilia = recessive

1. How many males have hemophilia? **2**
2. What is the genotype of I – 2? **Hh or HH**
3. What is the genotype of III – 2? **hh**
4. What is the phenotype of II – 1? **Hh**



Define Karyotype: a picture of chromosomes by size and shape

5. What are the human male gametes? Sperm female? Egg
How many pairs of chromosomes are found in the human body cell? 23
6. What is the normal male genotype? XY normal female? XX
7. Who determines the sex of an offspring? Male
8. Sex linked disorders are carried on which sex chromosome? **X** or Y
9. Give three examples of a sex linked disorder. Hemophilia, color blindness, and muscular dystrophy
10. A son inherits a sex- linked disorder from which parent? Mother
11. What are the first 22 pair of chromosomes called in a karyotype? Autosomes
12. In a certain species of rabbits, E is the gene for long ears. The gene for short ears is represented by e. A homozygous dominant male and a heterozygous female produced many offspring.
13. What is the phenotype of the male parent? EE female parent? Ee
14. What is the genotype of the male parent? long ears female parent? long ears
15. What is the phenotype probability (fraction) of their offspring? 4:0
16. What is the genotype probability (fraction) of their offspring? 2:2
17. A woman with blood type AB marries a man with blood type O. What is the genotype of the male? ii female? I^AI^B What are the phenotypes of the possible offspring? Type A or Type B What are the genotypes of the possible offspring? I^Ai or I^Bi

Karyotype A

Karyotype B

Karyotype C

