Review Packet: Genetics

1. Where is genetic information carried?
2. How much of your genetic information is passed from your mother? How much is passed from your father?
3. One possible trait passed from a parent is called an \_\_\_\_\_\_\_\_\_\_\_.
4. Who was Gregor Mendel
5. What were his jobs? Where did he live?
6. What organisms did he study? Why?
7. Why did he study these organisms?
8. What traits did he study from these organisms?
9. In this family label the generations using Mendel’s labeling methods. Great Grandfather, Grandfather, Father and Grandson.
10. What does it mean to cross organisms?
11. What did Mendel see when he crossed two pure breeding P organisms?
12. What did Mendel see when he crossed two organisms from the F1 generation?
13. Define genotype and phenotype. What is the difference?
14. Define dominant and recessive. What is the difference
15. What does it mean to be heterozygous for a trait? Give an example with a genotype and phenotype.
16. What does it mean to be homozygous recessive for a trait? Give an example with a genotype and phenotype.
17. What does it mean to be homozygous dominant for a trait? Give an example with a genotype and phenotype.
18. A mother with a Rr genotype and wavy hair is crossed with a father that is RR genotype with wavy hair. What are the possible genotypes and phenotypes of their children?
19. A mother with a gg genotype and no widows peak is crossed with a father that is Gg genotype with a widows peak. What are the possible genotypes and phenotypes of their children?
20. A tall and heavy elephant with the genes BBLL is crossed with a short and light elephant with the genes bbll. What are the possible combinations of genotypes and phenotypes of their young?
21. A Hhjj brown eyed and blond hair mother crosses with a hhJj blue eyed and brown hair father. What are the possible combinations of genotypes and phenotypes of their young?
22. Define incomplete dominance.
23. Define codominance.
24. What are the results of a cross with a brown cow and white cow that show codominance?
25. What are the results of a cross with a brown cow and brown and white cow that show codominance?
26. Snap dragon exhibit incomplete dominance. A red plant is crossed with a white plant. What are the genotypes and phenotypes of their offspring?
27. Snap dragon exhibit incomplete dominance. A pink plant is crossed with a pink plant. What are the genotypes and phenotypes of their offspring?
28. What is a carrier?
29. What is an autosomal pedigree?
30. What is a sex linked pedigree?