**Genetics Test Review II**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period \_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Physical characteristics studied in genetics \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Gregor Mendel cross-pollinated \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Factors that control traits \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4. Offspring the that always produces offspring with the same form of the trait as the parent: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. What does a punnett square show? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

6. The likelihood that a particular event will occur is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

7. Give an example of a phenotype: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. What is a genotype? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9. A change that reduces the organism’s chances of survival and reproduction is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ mutation.

10. A female whiptale lizard produces eggs that develop into new individuals without fertilization from a male. The offspring will be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to the female shark.

11. Mark the following as inherited trait (I) or acquired trait (A):

 \_\_\_\_ Jo runs faster after 6 weeks of track practice.

 \_\_\_\_ Addy has dimples.

 \_\_\_\_ Samantha eats Skittles for dessert every night.

 \_\_\_\_ Alan completes essays that win competitions.

 \_\_\_\_ Jessie has ear lobes that are attached.

 \_\_\_\_ Jane plays the drums well in the school theatre production.

12. A favorable mutation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the organism’s chances of survival.

13. Which of the following is favorable? Place an “F” by each that applies.

 \_\_\_\_ Bears with white fur in the arctic. \_\_\_\_ Monkeys with stronger tails.

 \_\_\_\_ A starfish with a nubbed leg. \_\_\_\_ Hummingbirds with short beaks.

 \_\_\_\_ Light brown lizards in the desert. \_\_\_\_ Rattlesnakes with more poisonous venom.

**Use the vocabulary word to complete the definitions.**

14. the passing of traits from parent to offspring: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

21. when both alleles are expressed; neither is dominant or recessive: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

22. the science that studies the laws of heredity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

23. the physical appearance or visible traits of an organism \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

24. an organism that has two different alleles for a trait \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

25. the different forms a gene may have for a trait \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

26. the allele that always “shows up” \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

27. the allele that is masked when a dominant allele is present \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

28. an organism that has two identical alleles for a trait \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

29. condensed strands of DNA \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

30. instructions for the various heredity traits of an organism are found in its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Write the symbols using the table above.**

Pure yellow seed- \_\_\_\_\_\_\_ Hybrid yellow seed- \_\_\_\_\_\_\_\_ Pure green seed- \_\_\_\_\_\_\_\_

Pure green pod - \_\_\_\_\_\_\_ Hybrid green pod- \_\_\_\_\_\_\_ Pure yellow pod- \_\_\_\_\_\_\_\_

Homozygous axial- \_\_\_\_\_\_\_ Heterozygous axial- \_\_\_\_\_\_\_\_ Homozygous terminal- \_\_\_\_\_\_\_

Homozygous tall- \_\_\_\_\_\_\_ Heterozygous tall- \_\_\_\_\_\_\_ Homozygous short- \_\_\_\_\_\_\_

**Record homozygous (ho) or heterozygous (he).**

\_\_\_\_\_ rr \_\_\_\_\_ Cc \_\_\_\_\_ AA \_\_\_\_\_\_tt \_\_\_\_\_\_Gg

\_\_\_\_\_ Aa \_\_\_\_\_ gg \_\_\_\_\_ TT \_\_\_\_\_\_ Ii \_\_\_\_\_\_RR

**Record the phenotypes given the genotypes. Use the table above.**

rr \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cc \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

AA \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ tt \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Gg \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cc \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Record the possible genotypes given the phenotype.**

Round \_\_\_\_\_\_\_\_\_\_ Wrinkled \_\_\_\_\_\_\_\_\_\_\_ Axial \_\_\_\_\_\_\_\_\_\_\_\_ Green \_\_\_\_\_\_\_\_\_\_\_

Inflated \_\_\_\_\_\_\_\_\_\_\_ Short \_\_\_\_\_\_\_\_\_\_\_\_ Yellow \_\_\_\_\_\_\_\_\_\_\_\_ Colored \_\_\_\_\_\_\_\_\_\_\_\_

**USE THE GENETICS CHART of Mendel’s pea plants!!! Label genotypes & phenotypes on each problem**.

14. A homozygous dominant inflated pod is crossed with a heterozygous pod.

15. A wrinkled seed shape is crossed with a pure round seed shape.

16. A pure yellow seed color is crossed with a pure green seed color.

17. Cross two heterozygous axial flowers.

18. Cross a homozygous green pod with a heterozygous green pod.

19. Cross a terminal flower position with a heterozygous axial flower position.

\*\*\*\*\*\*\*\*\*\*\*\*\*Know how to use a PEDIGREE!!!! Draw your own example for any trait you choose. Show 3 generations.