

Name _____ Date _____

7 _____ Life Science

Dominant & Recessive Practice 7B-3



Teacher:
Miss Stanley



(1- 10) In guinea pigs, black hair is dominant over white hair. Cross a homozygous black guinea pig with a homozygous white guinea pig, showing the first and second filial generations.

- _____ 1. What is the genotype of the black guinea pig?
- _____ 2. What is the phenotype of the offspring on the first filial generation?
- _____ 3. Give the genotypic ratio of the F_1 .
- _____ 4. Can the offspring of the F_1 be purebred?
- _____ 5. What percent of the offspring of the F_1 will be black?
- _____ 6. What is the probability of a purebred black guinea pig in the F_1 ?
- _____ 7. What is the phenotype of the offspring in the second filial generation?
- _____ 8. What is the probability of a purebred white guinea pig in the F_2 ?
- _____ 9. Out of 32 guinea pigs, how many would be black in the F_2 ?
- _____ 10. Give the phenotypic ratio of the F_2 .

(11-17) In race horses, black hair (F) and a trotting gait (G) are dominant traits. Recessive traits are chestnut hair (f) and a pacing gait (g). Show a cross between a pacing gait and a hybrid mare.

- _____ 11. What would be the genotype of the offspring who had a trotting gait?
- _____ 12. Approximately what percentage of the offspring would have a trotting gait?
- _____ 13. What percent of the offspring would be purebred dominant?
- _____ 14. Is it possible for a purebred black mare and a chestnut stallion to produce offspring that would be chestnut?
- _____ 15. What is the probability of a purebred black hair horse and a hybrid black hair horse producing offspring with black hair?
- _____ 16. What is the genotype of a chestnut hair horse?

_____17. What proportion of the offspring would have a pacing gait in a cross between two hybrids?