

Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

**C5L2 Dominant & Recessive Practice 2**

(1-15) Karen who is homozygous for the dominant trait of having a widow's peak hairline marries Jack who has a straight hairline. One of their daughter marries a man who is homozygous recessive.

- \_\_\_\_\_ 1. Give the genotypic ratio of the second filial generation.
- \_\_\_\_\_ 2. Give the phenotypic ratio of the second filial generation.
- \_\_\_\_\_ 3. In the  $F_1$  how many children have widow peaks?
- \_\_\_\_\_ 4. What is Jack's genotype?
- \_\_\_\_\_ 5. Name the recessive trait.
- \_\_\_\_\_ 6. Give the  $F_1$  genotypic ratio.
- \_\_\_\_\_ 7. In the second filial generation, how many offspring are homozygous?
- \_\_\_\_\_ 8. Which parent is homozygous?
- \_\_\_\_\_ 9. Can Jack and Karen have children who do not have a widow's peak?
- \_\_\_\_\_ 10. Give the genotype of a person who has a widow's peak.
- \_\_\_\_\_ 11. Can Karen and Jack have grandchildren who do have a widow's peak?
- \_\_\_\_\_ 12. In the first filial generation how many children have straight hairlines?
- \_\_\_\_\_ 13. In the second filial generation how many children have straight hairlines?
- \_\_\_\_\_ 14. What will Karen and Jack's grandkids look like?
- \_\_\_\_\_ 15. In the first filial generation, how many offspring are hybrid?

(16-30) A farmer crossed a yellow pea pod plant with a heterozygous green pea pod plant. Work the first and second filial generations. Second filial generation cross two heterozygous offspring.

- \_\_\_\_\_ 16. What will the farmer's crop look like the first year?
- \_\_\_\_\_ 17. What are the chances of this cross producing plants with yellow pea pods?
- \_\_\_\_\_ 18. If this cross produced 800 plants, how many of them are green?
- \_\_\_\_\_ 19. Give the genotypic ratio of the first filial generation.
- \_\_\_\_\_ 20. Give the phenotypic ratio of the first filial generation.
- \_\_\_\_\_ 21. Which parent is homozygous?
- \_\_\_\_\_ 22. Name the recessive trait.
- \_\_\_\_\_ 23. Give the F<sub>2</sub> genotypic ratio.
- \_\_\_\_\_ 24. In the second filial generation, how many offspring are homozygous?
- \_\_\_\_\_ 25. In the first filial generation, how many offspring are homozygous?
- \_\_\_\_\_ 26. In the second filial generation, how many offspring are homozygous dominant?
- \_\_\_\_\_ 27. In the second filial generation, how many offspring are heterozygous?
- \_\_\_\_\_ 28. Can the offspring of the F<sub>1</sub> be homozygous for a yellow pea pods?
- \_\_\_\_\_ 29. What percent of the offspring of the F<sub>1</sub> will have green pea pods?
- \_\_\_\_\_ 30. What is the probability of yellow pea pods in the F<sub>2</sub>?