Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_

Directions: Using the data in Table 1, write the genotype that corresponds to the phenotype descriptions

**Table 1: Mendel's Traits and Symbols for Pea Plants**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Traits** | **Dominant Allele** | **Symbol** | **Recessive Allele** | **Symbol** |
| Seed Shape | Round | R | Wrinkled | r |
| Seed Color | Yellow | Y | Green | y |
| Seed Coat Color | Colored | C | White | c |
| Pod Shape | Smooth | S | Constricted | s |
| Pod Color | Green | G | Yellow | g |
| Stem Height | Tall | T | Short | t |
| Flower Position | Axial | A | Terminal | a |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Phenotype** | **Genotype** |  | **Phenotype** | **Genotype** |
| 1. Heterozygous for height |  |  | 16. Constricted pod |  |
| 2. Homozygous dominant for seed shape |  |  | 17. Short height |  |
| 3. Heterozygous colored seed coat |  |  | 18. Green seed color |  |
| 4. Homozygous green pod |  |  | 19. Terminal flowers |  |
| 5. Homozygous short |  |  | 20. Pure wrinkled |  |
| 6. Homozygous tall |  |  | 21. Hybrid tall |  |
| 7. Homozygous axial |  |  | 22. Pure round |  |
| 8. Homozygous terminal |  |  | 23. Yellow seed pod |  |
| 9. Heterozygous flower position |  |  | 24. Hybrid smooth |  |
| 10. Heterozygous seed color |  |  | 25. Pure smooth pod |  |
| 11. Homozygous smooth pod |  |  | 26. Hybrid pod color |  |
| 12. Homozygous constricted pod |  |  | 27. White seed coat |  |
| 13. Homozygous recessive for seed coat color |  |  | 28. Wrinkled seed |  |
| 14. Heterozygous for pod color |  |  | 29. Pure colored seed coat |  |
| 15. Homozygous round seed |  |  | 30. Hybrid flower position |  |