

**Comparison of Inheritance Types****I. Mendelian vs. Non-Mendelian Inheritance**

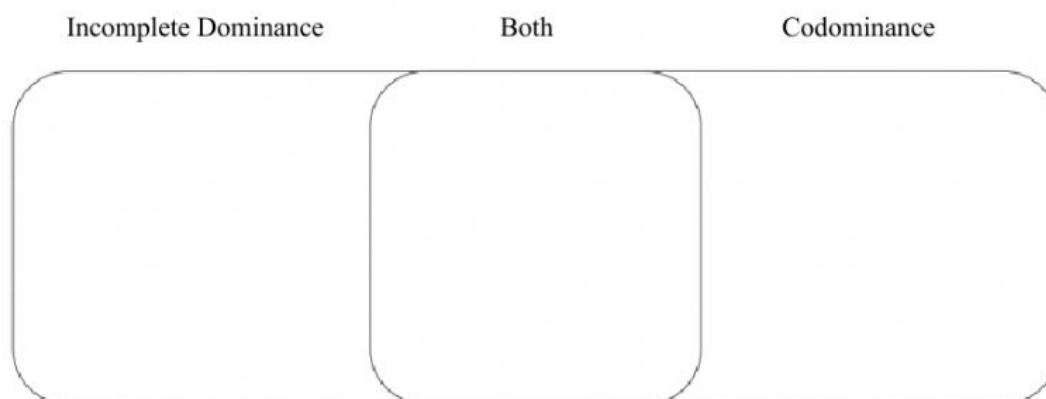
*Identify which type of inheritance is being described in each of the following, using the options given in the provided choice bank. Write the letter of the correct answer on the blank.*

Choice Bank for Questions 1-10	
A. Complete dominance	C. Codominance
B. Incomplete dominance	D. Incomplete dominance AND Codominance

- \_\_\_\_\_ A form of dominance where a third phenotype appears after a cross, usually a blend of the two parent phenotypes.
- \_\_\_\_\_ A ratio of 3:1 is seen in the offspring, where for every three offspring that have round seeds there is one that has wrinkled seeds.
- \_\_\_\_\_ An example of this is a cross between a carnation plant that has red flowers and another carnation plant that has white flowers. The offspring produced pink flowers.
- \_\_\_\_\_ One of the two alleles is fully expressed while the other is overpowered.
- \_\_\_\_\_ The allele is not fully expressed in the heterozygote, but is partially expressed.
- \_\_\_\_\_ The offspring shows the phenotypic traits of both parents at the same time.
- \_\_\_\_\_ The resulting pattern in the offspring does not follow Mendelian inheritance patterns.
- \_\_\_\_\_ An example is blood type AB where both alleles  $I^A$  and  $I^B$  are fully expressed.
- \_\_\_\_\_ Only one of the two parental phenotypes is expressed in the hybrid offspring.
- \_\_\_\_\_ It assumes that one of the two alleles is dominant over the other.

**II. Complete the Venn diagram**

*Record at least 2 items in each section of the diagram below.*



### III. Comparison of Non-Mendelian Inheritance Types

Identify which type of inheritance is being described in each of the following, using the options given in the provided choice bank. Write the letter of the correct answer on the blank. Some choices will be used more than once.

Choice Bank for Questions 11-20		
A. Incomplete dominance	B. Codominance	C. Polygenic inheritance
D. Epistatic inheritance		E. Sex-linked inheritance

11. \_\_\_\_ A single “master gene” can determine whether other genes are or are not expressed. Complete baldness is an example of this type of inheritance.
12. \_\_\_\_ Males are more likely to inherit recessive conditions than females in this type of inheritance.
13. \_\_\_\_ The heterozygous individuals will result in an intermediate/blended phenotype between the parents.
14. \_\_\_\_ Inheritance pattern that results in a wide variety of phenotypes. An example is skin color.
15. \_\_\_\_ Inheritance pattern that results in both phenotypes expressed equally in the heterozygous offspring.
16. \_\_\_\_ Many genes are linked together to produce the trait.
17. \_\_\_\_ Traits following this inheritance pattern are usually written as superscripts on X chromosomes.

