Names \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_

**Inheritance Practice**

1. **Mendelian Inheritance**: Dominant and recessive traits

In human, having dimples (D) is dominant to not having dimples (d). Cross a **heterozygous** male that has dimples with a female that does not have dimples and determine the possible genotypes and phenotypes of their offspring. **Show your work!**

Chances offspring with dimples \_\_\_\_\_\_\_\_\_

Chances offspring with no dimples \_\_\_\_\_\_\_\_

Chances homozygous dominant offspring \_\_\_\_\_\_\_

Chances homozygous recessive offspring \_\_\_\_\_\_\_

Chances heterozygous offspring \_\_\_\_\_\_\_\_

2. **Incomplete Dominance**: neither trait is dominant; heterozygous shows a blend of two homozygous traits

In humans, hair type shows incomplete dominance. The two homozygous individuals are curly hair (HH) and straight hair (H’H’) and the heterozygous individual is wavy hair (HH’). Cross **two wavy hair** individuals and determine the possible genotypes and phenotypes of their offspring. **Show your work!**

Chances curly hair offspring \_\_\_\_\_\_\_\_

Chances straight hair offspring \_\_\_\_\_\_\_\_

Chances wavy hair offspring \_\_\_\_\_\_\_\_

3. **Codominance**: when both traits are dominant and are equally expressed in the heterozygous individual

In shangels (yes I made this up), fur color is inherited through codominance. If a purple shangel (PP) mates with a green shangel (GG), their offspring with have purple and green fur (PG). Cross a **purple** male shangel with a **purple and green** female shangel to determine the possible genotypes and phenotype of their offspring. **Show your work!**

Chances purple offspring \_\_\_\_\_\_\_\_

Chances green offspring \_\_\_\_\_\_\_\_

Chances purple and green offspring \_\_\_\_\_\_\_

**Practice Problems**

4. In snapdragons, homozygous red flowers (BB) cross with homozygous white flowers (B’B’) to make heterozygous pink flower offspring (BB’). Cross a white flower with a pink flower and determine the possible genotypes and phenotypes of the offspring. **Show your work!**

Chances Red Offspring \_\_\_\_\_\_\_\_

Chances White Offspring \_\_\_\_\_\_\_\_

Chances Pink Offspring \_\_\_\_\_\_\_\_\_

What type of inheritance is this an example of? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How do you know? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5. In howlers, homozygous brown eyes (BB) cross with homozygous green eyes (GG) to make heterozygous brown and green eyed (BG) offspring. Cross two howlers that both have brown and green eyes and determine the possible genotypes and phenotypes of their offspring. **Show your work!**

Chances Brown Eyed Offspring \_\_\_\_\_\_\_\_\_\_

Chances Green Eyed Offspring \_\_\_\_\_\_\_\_\_\_\_

Chances Brown and Green Eyed Offspring \_\_\_\_\_\_\_\_\_

What type of inheritance is this an example of? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How do you know? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_