

MENDEL'S 3 LAWS OF INHERITANCE:



1. The Law of Dominance states that the _____ allele will express itself over a _____ allele.
2. The Law of Segregation (separation) states that when chromosomes _____ in meiosis, each gamete (egg or sperm) will receive only _____ chromosome from each pair.
3. The Law of Independent Assortment states that the inheritance of one _____ does not affect the _____ of another.

DIHYBRID CROSSES: — Follow these steps:

Dihybrid crosses are used when finding the possible genotypes for offspring when considering _____ traits at the _____ time.

16 squares

1. Write out the parent's genotypes.
2. Write out the possible allele combinations that each parent could contribute to the offspring. (Use the FOIL method.)
Place these on the outside of the dihybrid Punnett square.
3. Combine the alleles from the top and left to fill in the square.
Determine the phenotypic ratio.

EXAMPLE #1:

Cross two parent pea plants that are heterozygous for pea color and flower color.

Notes:

*Yellow peas (Y) are dominant to green peas (y)
Purple flowers (P) are dominant to white flowers (p).*

EXAMPLE #2:

Tall plants (D) are dominant over dwarf plants (d). Purple flowers (W) are dominant over white flowers (w). Cross a homozygous dominant parent with a homozygous recessive parent.
