

Pre – AP Biology

Mendelian Genetics (5.1)

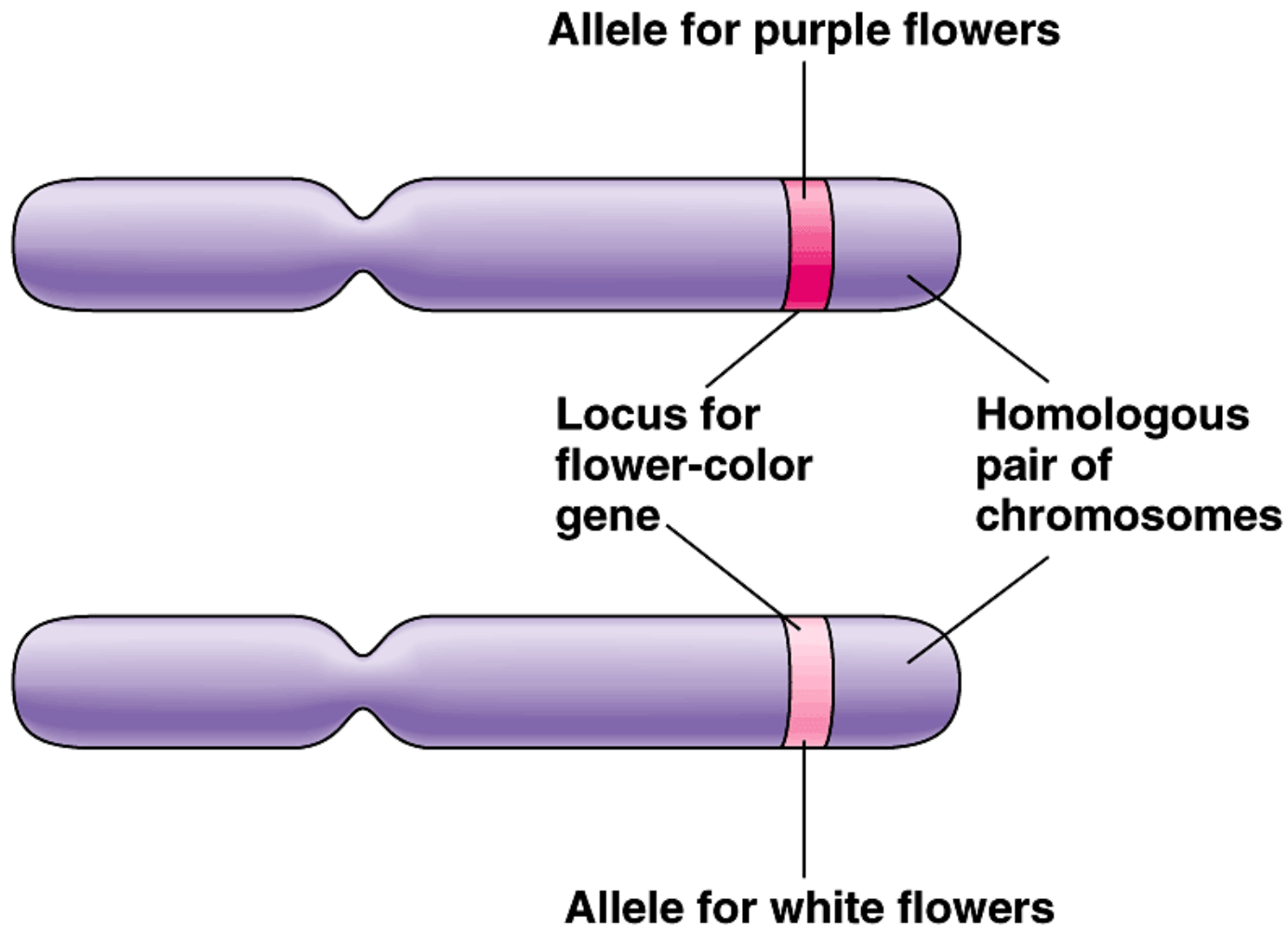
Gregor Mendel



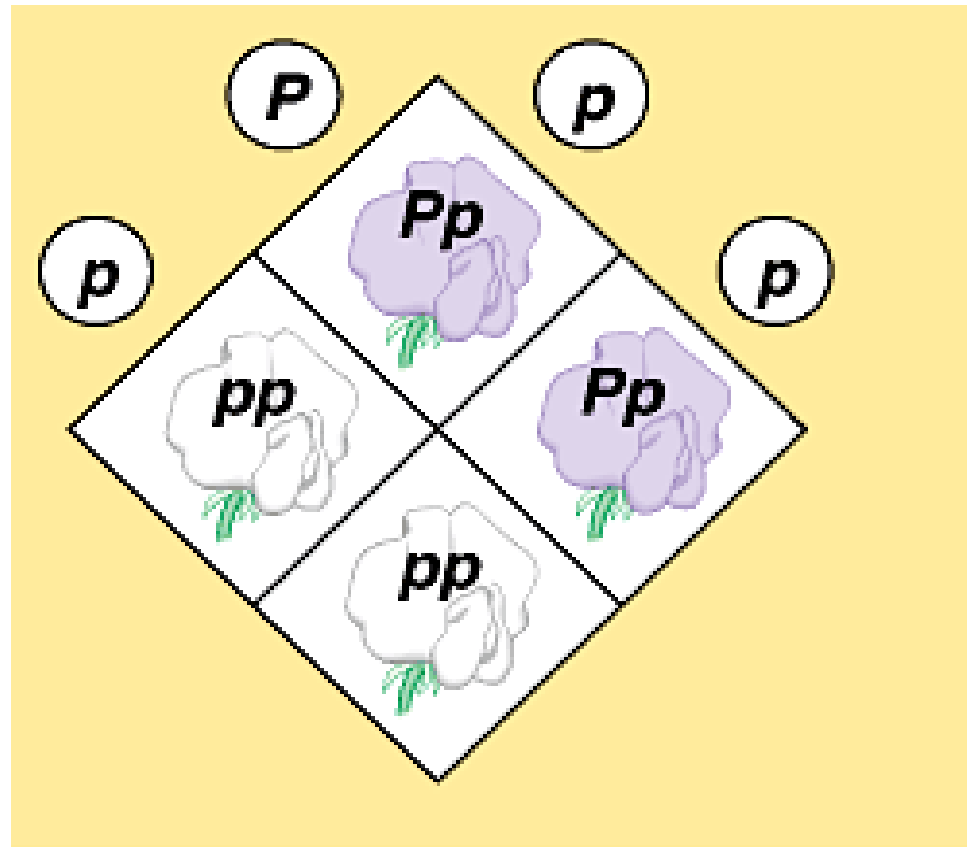
Character and Trait



Alleles – **different versions** of a gene.
Both genes code for flower color.



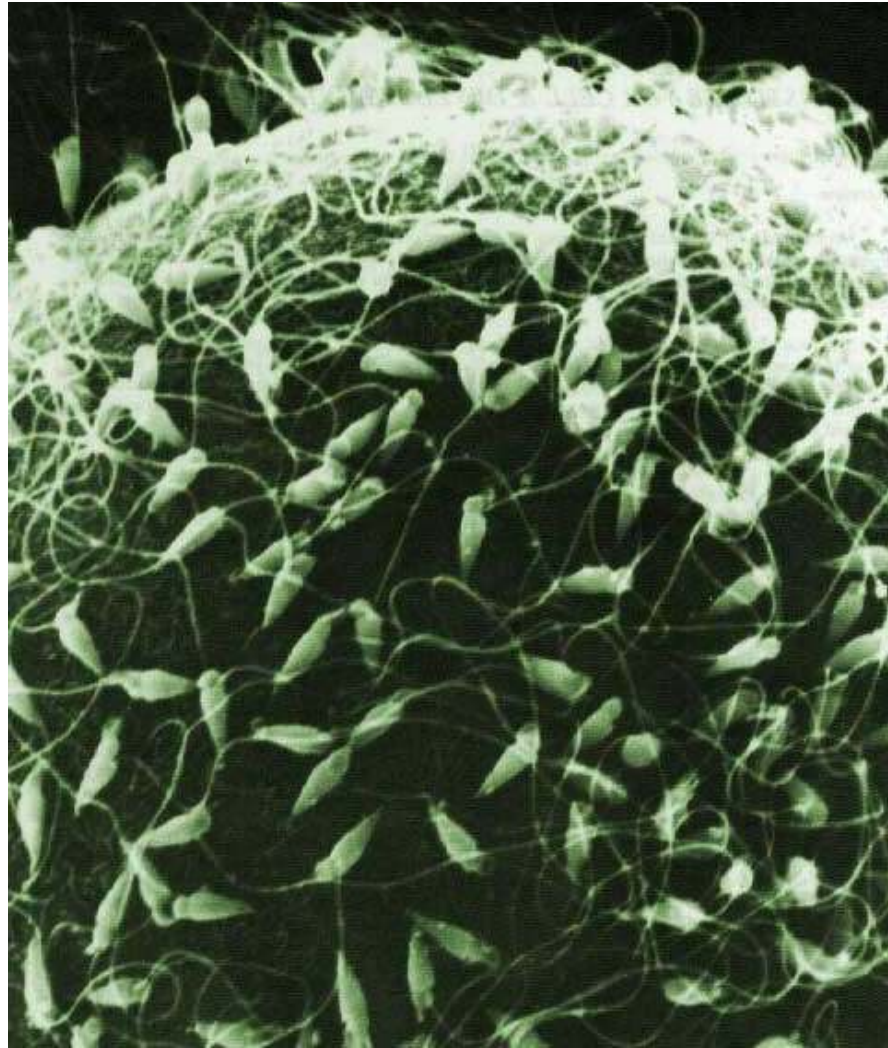
Need 2 Alleles to make a trait



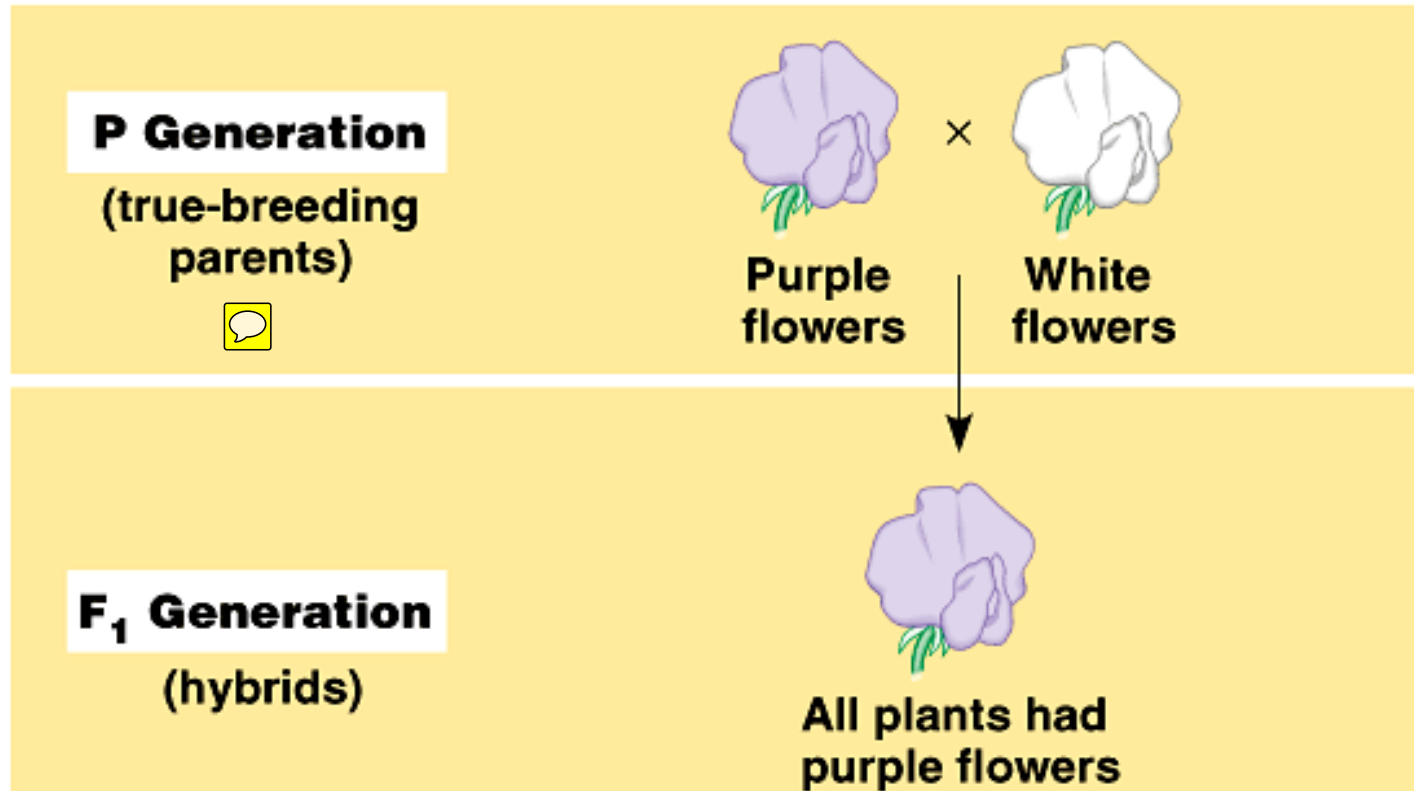
Cummings.



One from **EACH** parent
Sperm AND Egg

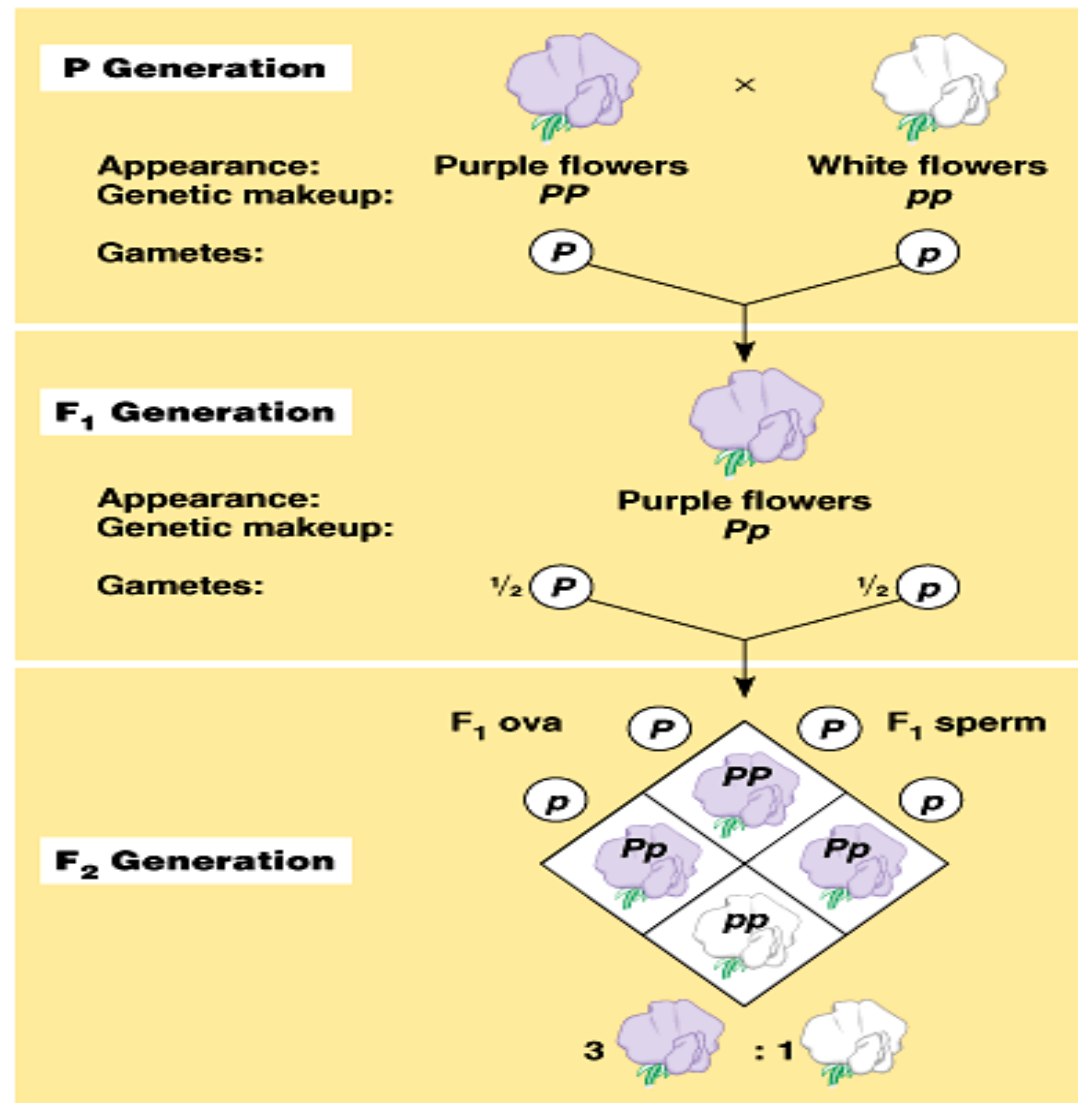


True breed versus hybrid



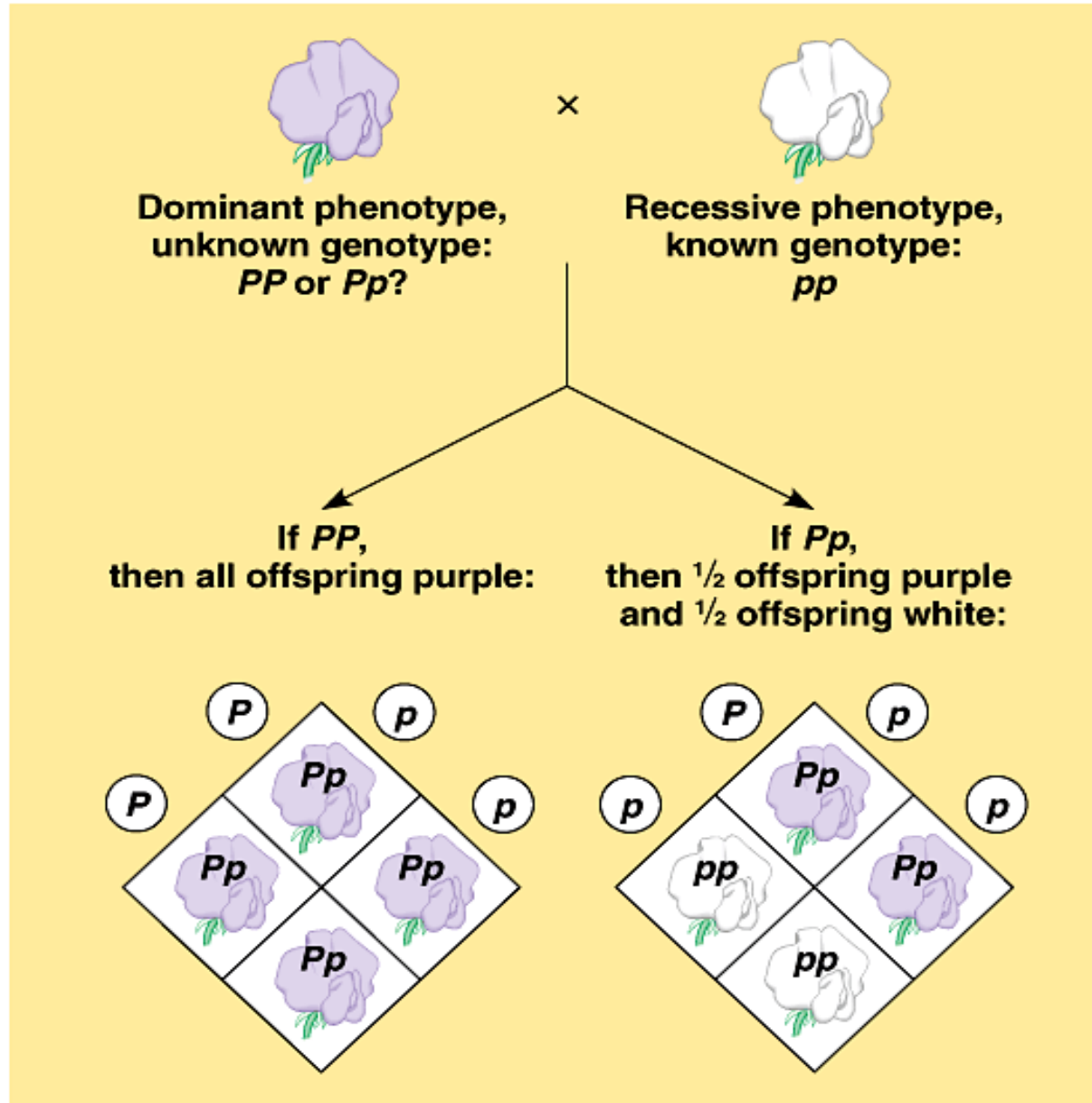
Phenotype vs. Genotype

Physical Trait vs. Gene allele type

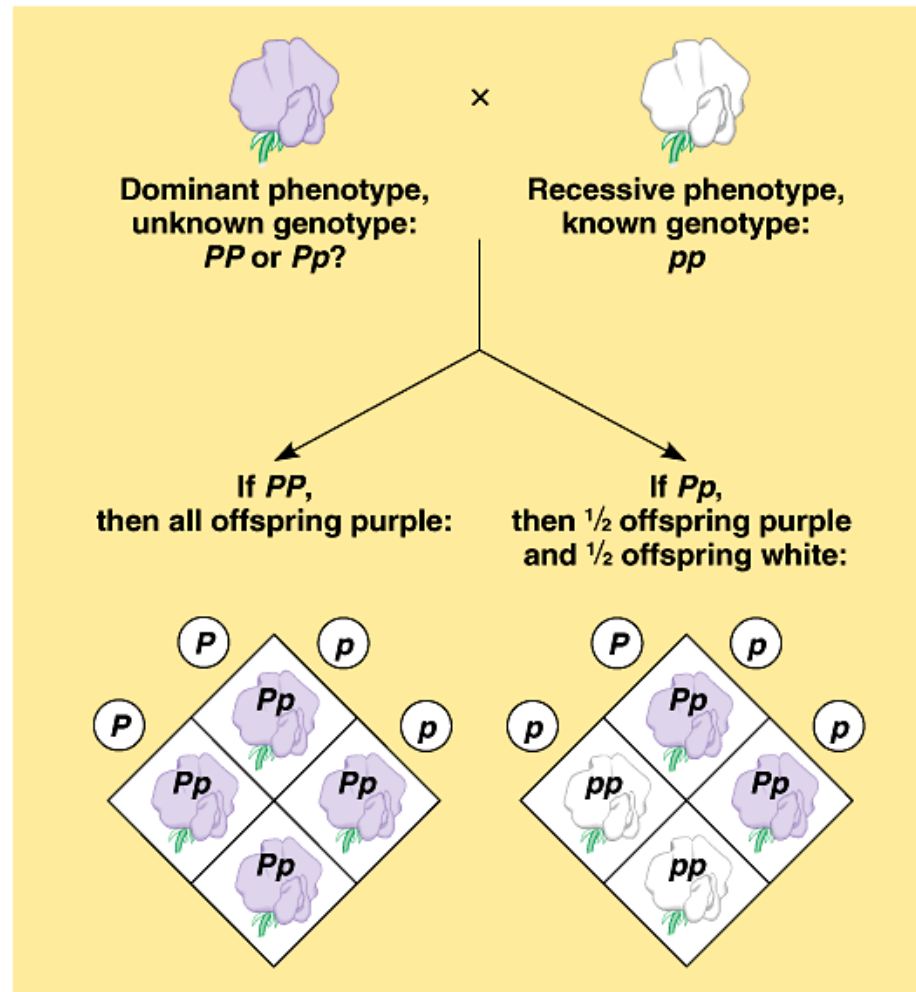




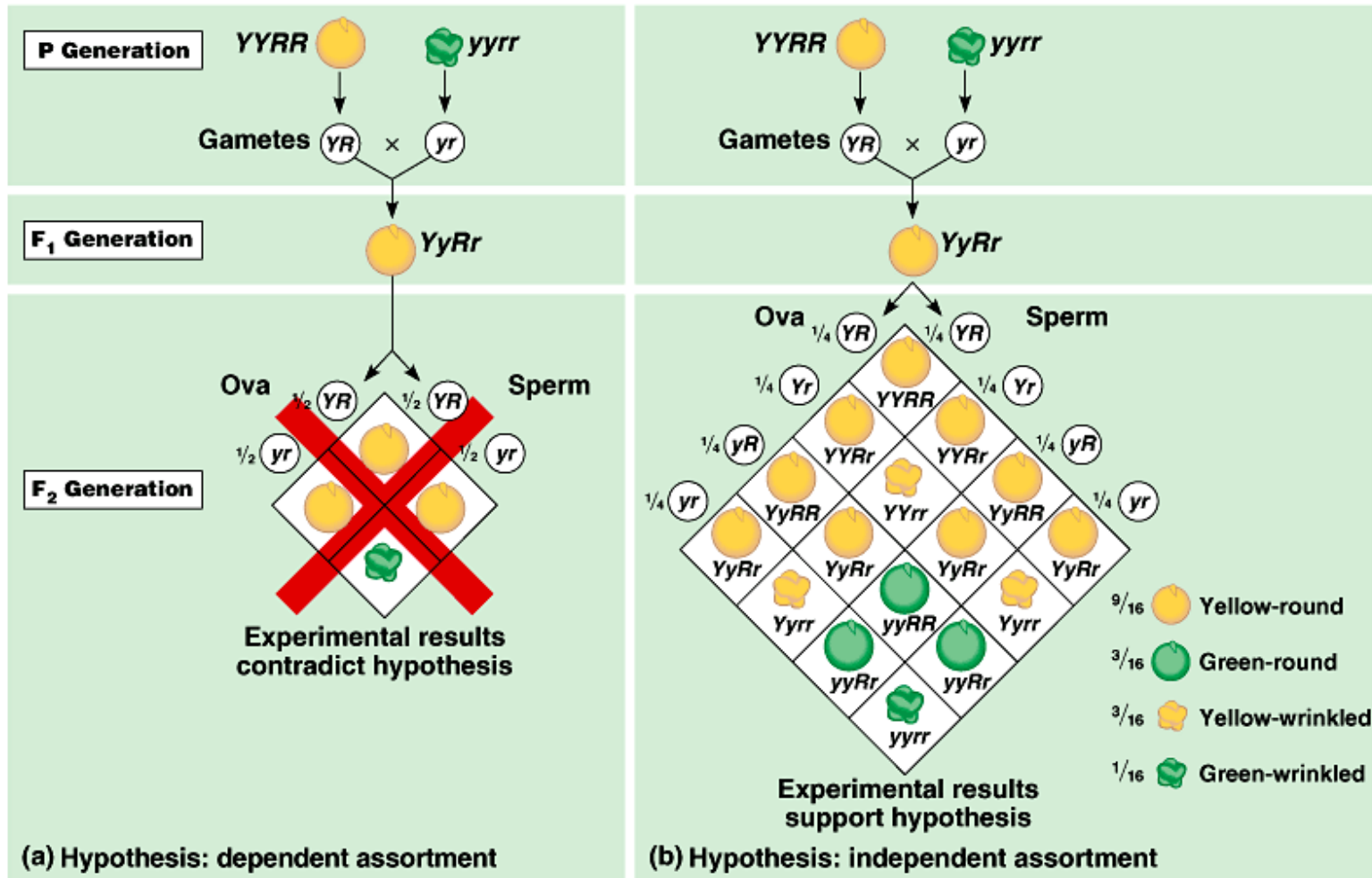
Test Cross



Monohybrid Punnett



Dihybrid Punnett



Independent Assortment – See the different outcomes at the bottom? It was because of how they lined up on the midplane.

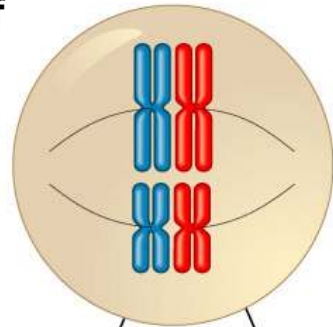
Key



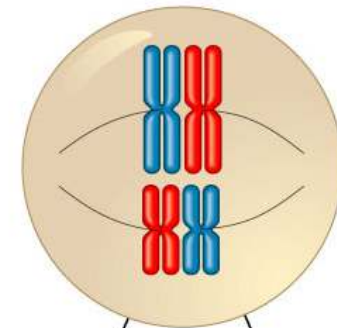
Maternal set of chromosomes

Paternal set of chromosomes

Possibility 1

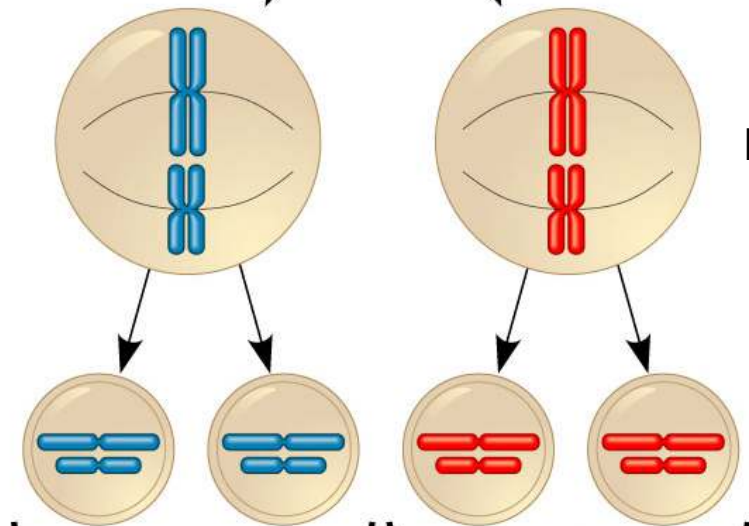


Possibility 2



Two equally probable arrangements of chromosomes at metaphase I

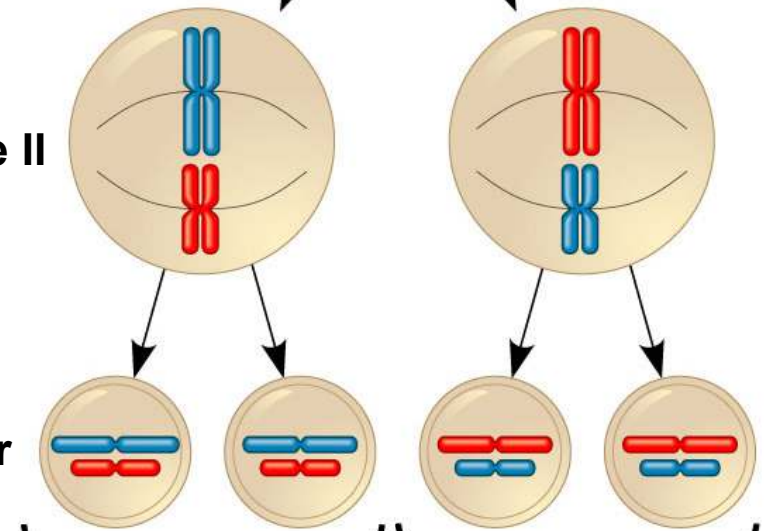
Metaphase II



Combination 1

Combination 2

Daughter cells



Combination 3

Combination 4

Chance has NO memory.

