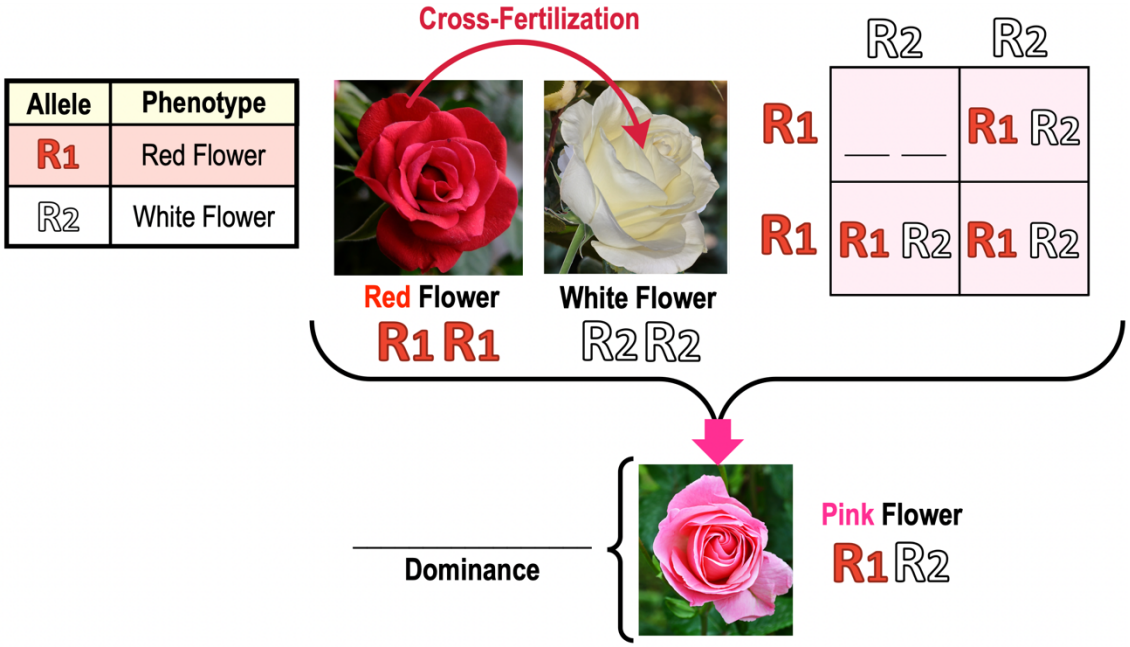
CONCEPT: INCOMPLETE DOMINANCE VS. CODOMINANCE

Incomplete Dominance

●Heterozygotes show a _____ phenotype that is an *intermediate* of the phenotypes from the two alleles.

EXAMPLE: Incomplete Dominance in Red & White Flower Cross Makes Pink "Baby" Flowers.

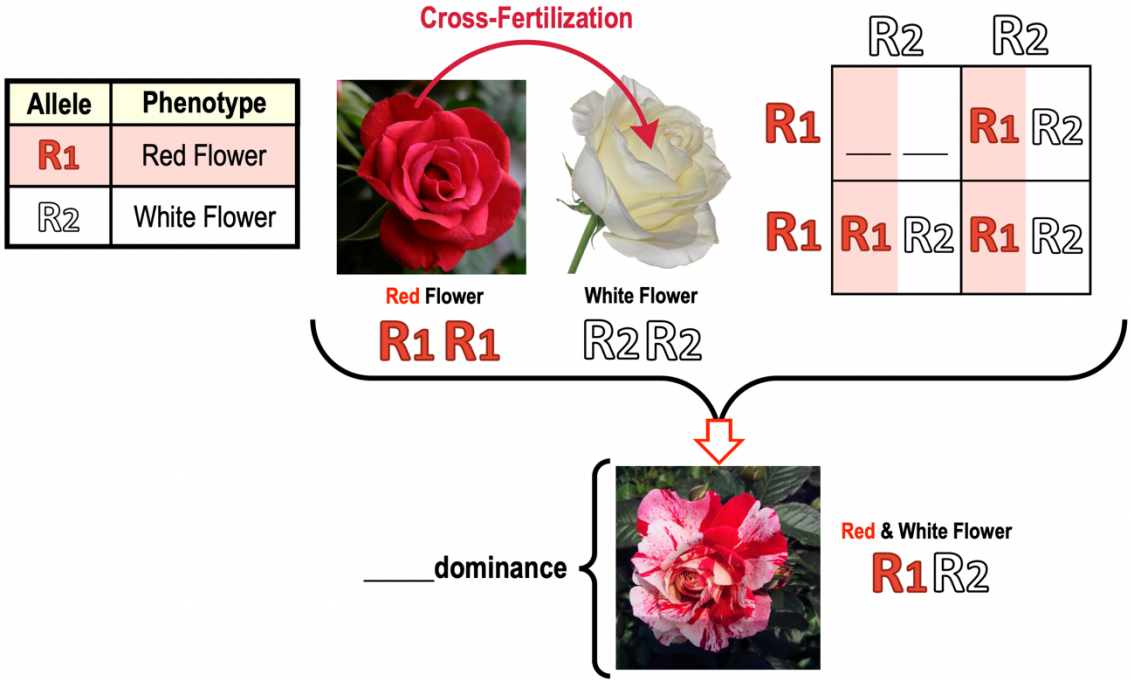


Codominance

●Heterozygotes _____ express both phenotypes from each allele in "patches".

□ 2 different alleles "dominate" _____ (one allele does _____ mask expression of the other).

EXAMPLE: Codominance in Red & White Flowers.



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PRACTICE: You cross two true breeding lines of petunia. One produces red flowers and the other white flowers. The F1 offspring all show pink flowers. You conclude from this that:

a) Red is dominant.
b) White is dominant.
c) Red is incompletely dominant.
d) Red is incompletely recessive.
e) None of the answers listed above are correct.

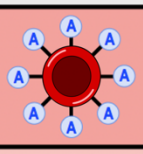
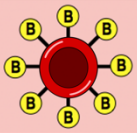
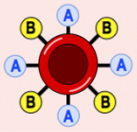
Codominance & Blood Type

●Blood-type in humans is a common example of _____*dominance*.

□ Blood type is determined by combinations of _____ possible alleles: I^A, I^B, or *i*.

□ I^A & I^B alleles are _____, whereas the *i* allele is _____.

EXAMPLE: ABO Blood Types.

Genotype	Surface Molecules	Phenotype
$I^A I^A$ or $I^A i$	(A) Only	 Type-____ blood
$I^B I^B$ or $I^B i$	(B) Only	 Type-____ blood
$I^A I^B$	(A) and (B)	 Type-_____ blood
i i	NONE	 Type-____ blood

PRACTICE: If you look at a blood sample from a person who is heterozygous at the sickle cell locus you will see both normal circular red blood cells and sickle-shaped red blood cells. This is an example of

a) multi-locus inheritance.
b) complete dominance.
c) incomplete dominance.
d) codominance.
e) linked genes.

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PRACTICE: A gene for the MN blood group has codominant alleles M and N. If both children in a family are of blood type M, which of the following situations is possible?

a) Each parent is either M or MN.
b) Each parent must be type M.
c) Both children are heterozygous for this gene.
d) Neither parent can have the N allele.

PRACTICE: The number of different alleles for ABO blood types is _____ resulting in _____ different blood types.

a) 3; 3.
b) 4; 3.
c) 6; 3.
d) 3; 4.
e) 2; 4.