

Answer on Question #55909 - Biology - Genetics

Trihybrid Cross (three genes)

P: ♀ AABBCc * ♂ aabbcc

G: (ABC); (abc)

F₁: ♀ AaBbCc * ♂ AaBbCc

F₂:

♀/♂	ABD	ABd	AbD	Abd	aBD	aBd	abD	abd
ABD	AABBDD	AABBdD	AABbDD	AABbDd	AaBBDD	AaBBdD	AaBbDD	AaBbDd
ABd	AABBdD	AABBdd	AABbDd	AABbdd	AaBBdD	AaBBdd	AaBbDd	AaBbdd
AbD	AABbDD	AABbDd	AAbbDD	AAbbDd	AaBbDD	AaBbDd	AabbDD	AabbDd
Abd	AABbDd	AABbdd	AAbbDd	AAbbdd	AaBbDd	AaBbdd	AabbDd	Aabbdd
aBD	AaBBDD	AaBBdD	AaBbDD	AaBbDd	aaBBDD	aaBBdD	aaBbDD	aaBbDd
aBd	AaBBdD	AaBBdd	AaBbDd	AaBbdd	aaBBdD	aaBBdd	aaBbDd	aaBbdd
abD	AaBbDD	AaBbDd	AabbDD	AabbDd	aaBbDD	aaBbDd	aabbDD	aabbDd
abd	AaBbDd	AaBbdd	AabbDd	Aabbdd	aaBbDd	aaBbdd	aabbDd	aabbdd
	Phenotypic Ratio							
	27	9	9	9	3	3	3	1

- female and male gametes
- homozygous
- heterozygous

Ratio of homozygous offspring = 2 / 64 = 1 / 32 = **3.1%**

Ratio of heterozygous offspring = 62 / 64 = 31 / 32 = **96.9 %**