

Gametes = 2^n $n = \text{No. of Heterozygotes.}$

$\underline{AA} \underline{Bb} \underline{Cc} \Rightarrow 2^2$

$\boxed{\text{Types of genotype} = 3^n}$

Types of Gametes $\Rightarrow 2^n \Rightarrow \text{phenotypic category.}$

$\underline{Aa} \underline{Bb} \underline{Cc} \Rightarrow 2^3 = \frac{1}{8}$

$\boxed{\text{No. of zygote produced in selfing of a genotype} = 4^n}$

$\frac{\underline{AA}}{2^0} \frac{\underline{BB}}{2^0} \frac{\underline{Cc}}{2^1} \Rightarrow 2^1$

$2^n, 3^n, 4^n$

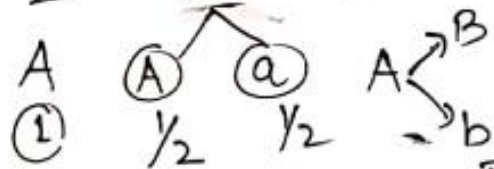
$= 2^n \frac{\underline{AA}}{2^0} \underline{Bb} \underline{Cc}$
 $\frac{2^0}{1} \quad 2^1 \quad 2^1$

2^n Gametes formation
 $2^1 = 2$

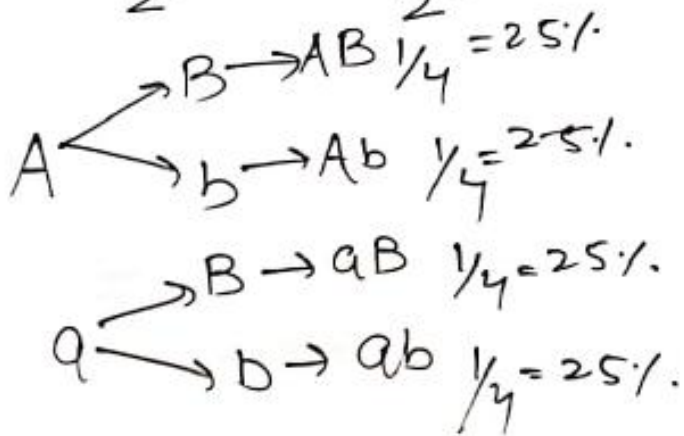
2^n
 $= n = \text{Heterozygous}$ of genotype = 3^n Heterozygotes.

AA, Aa, $\frac{AA}{x} \frac{Bb}{y}$, $\frac{Aa}{2} \frac{Bb}{2}$, AABBBCC
 2^0 , 2^1 , 2^1 , 2^2 , 2^1

$\frac{AA}{x} \frac{Bb}{2^2} \frac{CC}{2^3}$ $\frac{Aa}{2^3} \frac{Bb}{2^3} \frac{CC}{2^3}$



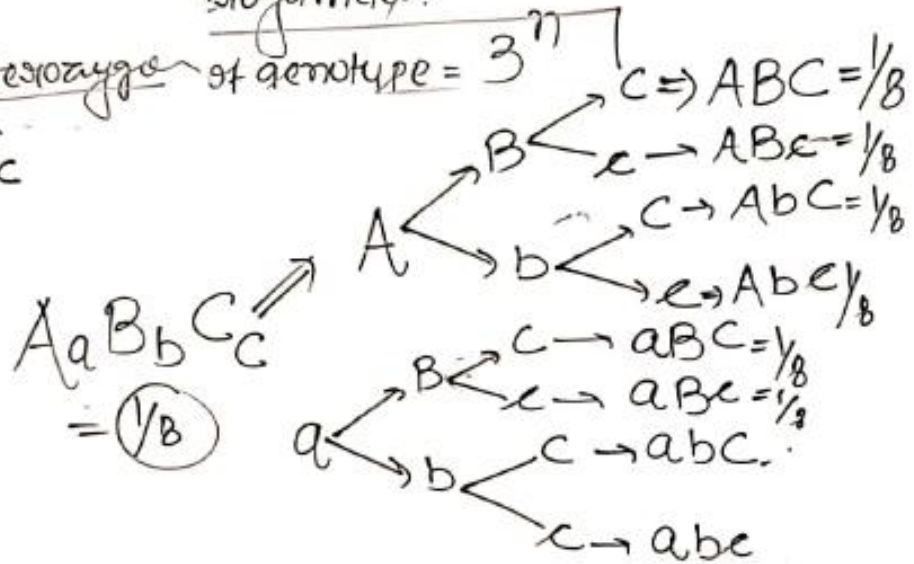
$AaBb$



2^n Gametes formation
 $2^1 = 2$

2^n
 $= n =$ Heterozygous of genotype = 3^n 210 gametes.

$aaBBcc \times AaBbCc$



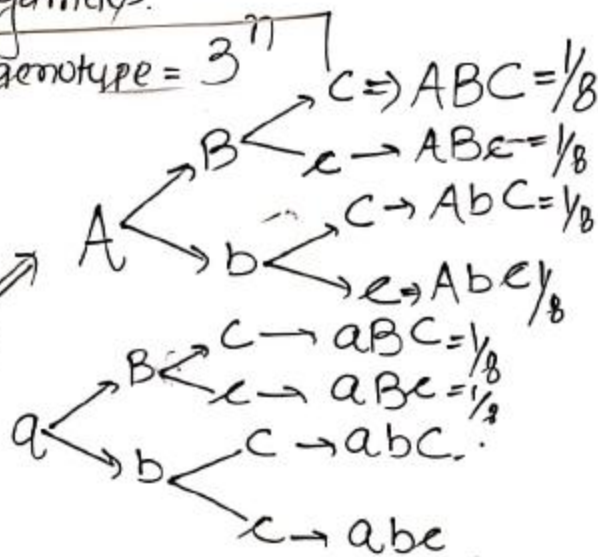
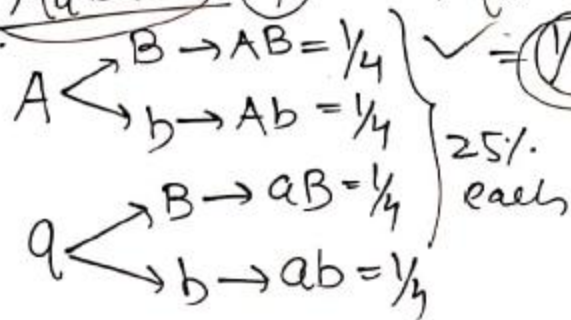
2^n Gametes formation
 $2^1 = 2$

2^n = n = Heterozygous of genotype = 3ⁿ gametes.

AABBCc?

AABbCc = ?

AaBb = (4)



GENE INTERACTION.

Allelic / Intragenic interaction
 allele same gene
 same locus.
 Incomplete dominance

RR (Red) × ♂♂ (White) (P)
 R × ♂
 R♂ All pink

1) (Mirabilis jalapa)
 4 o'clock pl
 Gul-e-ban
 3:1

Phenotype
 Red 1 : Pink 2 : White 1
 Genotype

♀ \ ♂	R	♂	
R	RR	R♂	
♂	R♂	♂♂	
	RR	R♂	♂♂
	1	2	1

GENE INTERACTION:

Co-dominance

$$AB \text{ Blood} = \frac{I^A I^B}{}$$

→ AB Blood group
 $I^A I^B$

X White
 $R_2 R_2$ $B_1 B_1$ $B_2 B_2$

→ Carriers of sickle cell
anemia
($Hb^A Hb^S$)

$R_1 R_2$ (Roan color) $B_1 B_2$

	R_1	R_2
R_1	$R_1 R_1$	$R_1 R_2$
R_2	$R_1 R_2$	$R_2 R_2$

$R_1 R_1$ = Black $R_1 R_2$ (Roan) $R_2 R_2$
1 : 2 : 1