The Practise Ground

Class 10-12 Biology

Mendel's Laws of Inheritance

Heredity and variation in pea plants

1 Dominance

Law 1

In a hybrid, the dominant trait shows and hides the recessive

2 Segregation

Law 2

Allele pairs separate during gamete formation

3 Independent assortment

Law 3

Genes for different traits are inherited independently

4 3 : 1 and 9 : 3 : 3 : 1

Ratios

Monohybrid and dihybrid phenotypic ratios in F2

TT	Tt	tt	F1	F2
homozygous tall	**heterozygous** tall	**homozygous** short	**first** generation	**second** generation

Remember

Genotype is the gene makeup (Tt). Phenotype is the visible trait (tall).

A test cross with tt shows if a tall plant is TT or Tt.

Monohybrid cross

Cross Tt × Tt gives TT, Tt, Tt, tt.

Genotype ratio 1 : 2 : 1. Phenotype ratio 3 tall : 1 short.

Think you've got it? Test yourself.

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