

Inheritance What is an allele?	Inheritance Dominant allele
Inheritance Recessive allele	Inheritance Homozygous or heterozygous: TT, Tt, tt?
Inheritance Genotype versus phenotype	Inheritance Biology only What is codominance?
Inheritance Biology only Two roan cattle (RW × RW) are crossed. What is the phenotype ratio?	Inheritance What is polygenic inheritance?

An allele that is expressed in the phenotype even when only one copy is present.

A different version (alternative form) of the same gene.

TT and tt are homozygous (two identical alleles). Tt is heterozygous (two different alleles).

An allele that is only expressed in the phenotype when two copies are present.

Both alleles are expressed in the phenotype of a heterozygous organism, for example roan cattle or blood group AB.

Genotype is the alleles an organism has.
Phenotype is the characteristic that is expressed.

A feature controlled by several genes working together, such as height. Most features are polygenic.

1 red : 2 roan : 1 white. The heterozygote has its own phenotype, so it is not 3 : 1.

Inheritance

Tt × Tt: what are the offspring genotypes and phenotypes?

Inheritance

Two unaffected parents have an affected child. What does this show?

Inheritance

What is the probability of a recessive child from two carrier parents?

Inheritance

Which sex chromosomes do females and males have?

Inheritance

Why is there a 50% chance of a boy or a girl?

The characteristic is recessive and both parents are carriers (heterozygous).

1 TT : 2 Tt : 1 tt, giving 3 tall : 1 short.

Females are XX. Males are XY.

1 in 4 (0.25 or 25%). A 3 : 1 ratio means 1 in 4, not 1 in 3.

All eggs carry X. Half of the sperm carry X and half carry Y, so the sperm decides the sex.