Expt: 11 Prepared pedigree charts of any one of the genetic traits such as rolling of tongue, blood groups, ear lobes, widow's peak and colour blindness.

Widow's Peak

Widow's peak is a genetic physical trait that is characterized by a hairline shape that comes to a point on the forehead.

Its name is derived from an older belief that it was a mark of someone who would experience early widowhood, but this claim holds no strong evidence to be true.

Instead, it is a physical trait that is inherited and is most likely the cause of multiple genes working together.

Identification

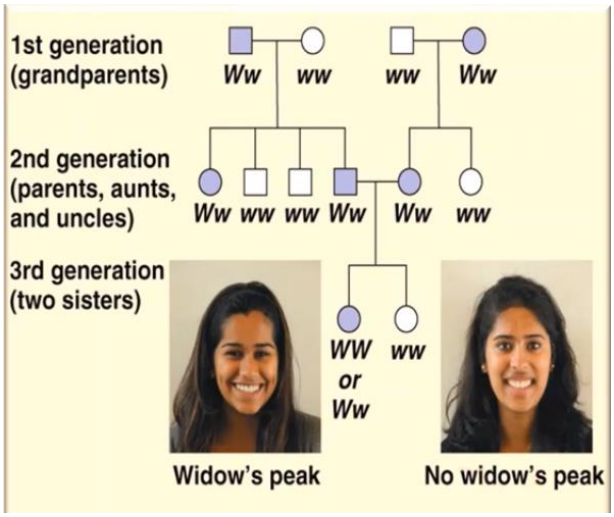
The given pedigree is identified as Widow's Peak.

It is an **Autosomal Dominant Disorder**.

Features of the trait:

Widow's Peak is a dominant trait, people with the genotype *WW* and the genotype *Ww* will have a widow's peak.

The people with the genotype ww will not have the trait.



Tongue Rolling

Identification

The given pedigree is identified as Tongue Rolling.

It is an **Autosomal Recessive disorder**.

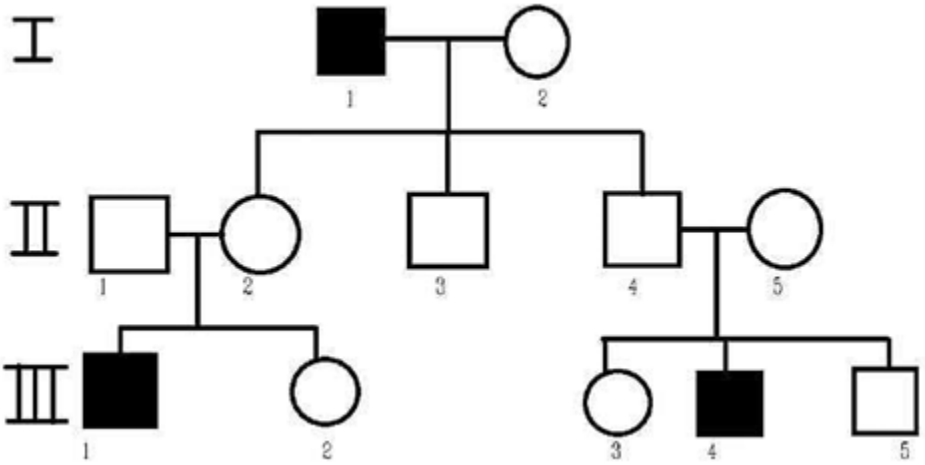
Features of the trait:

The trait of tongue rolling is present in every generation.

Both males and females are affected by the trait, indicating an autosomal inheritance pattern.

The parents of affected individuals are unaffected, indicating a recessive inheritance pattern.

The probability of an offspring inheriting the trait is 25% if both parents are carriers of the recessive allele.



Colour Blindness

Identification

The given pedigree is identified as Colour Blindness.

It is a **Sex Linked Recessive Disorder.**

Features of the trait:

Males have 1 X chromosome and 1 Y chromosome, and females have 2 X chromosomes.

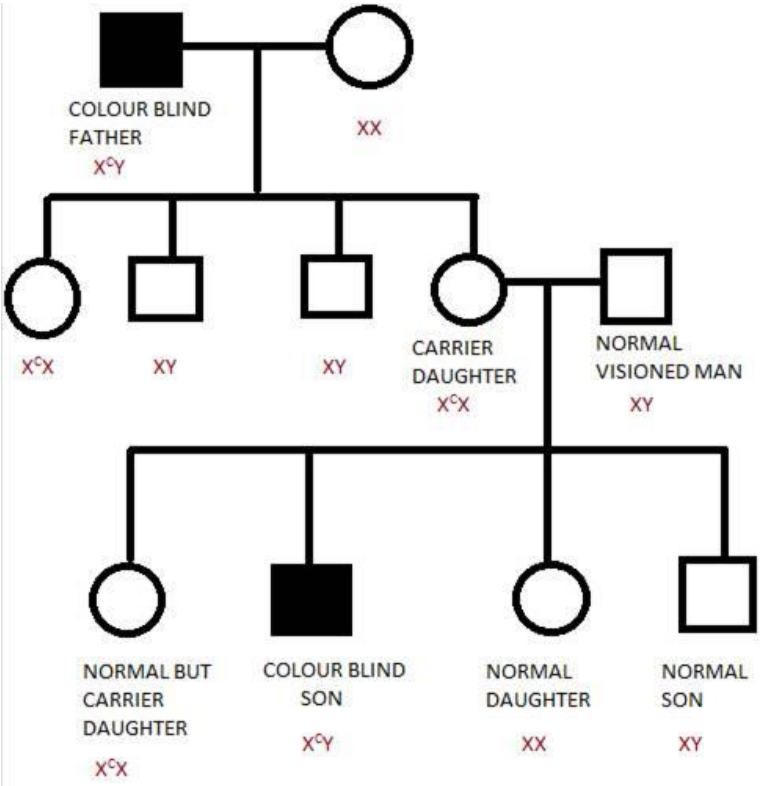
The genes that cause red-green color blindness are passed on the X chromosome.

Since it's passed on the X chromosome, red-green color blindness is more common in men. This is because:

Males have only 1 X chromosome, from their mother. If that X chromosome has the gene for red-green color blindness (instead of a normal X chromosome), they will have red-green color blindness.

Females have 2 X chromosomes, one from their mother and one from their father.

To have red-green color blindness, **both the** X **chromosomes** should have the gene for red-green colour.



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