

Hemophilia is a sex-linked recessive trait. The gene for this trait lies on the X chromosome. Recall that females are XX and males are XY. Therefore, hemophilia is much more common in males because they only need to inherit 1 copy of the recessive allele to express the disease. Females must inherit 2 copies of the recessive allele to express the disease. If they inherit only 1 copy of the recessive allele, they will be a carrier of the disease but it will not be expressed in them.

$X^N$  = normal blood clotting

$X^n$  = hemophilia

$X^?$  = unknown

Label the following pedigree with the genotypes of each individual.

