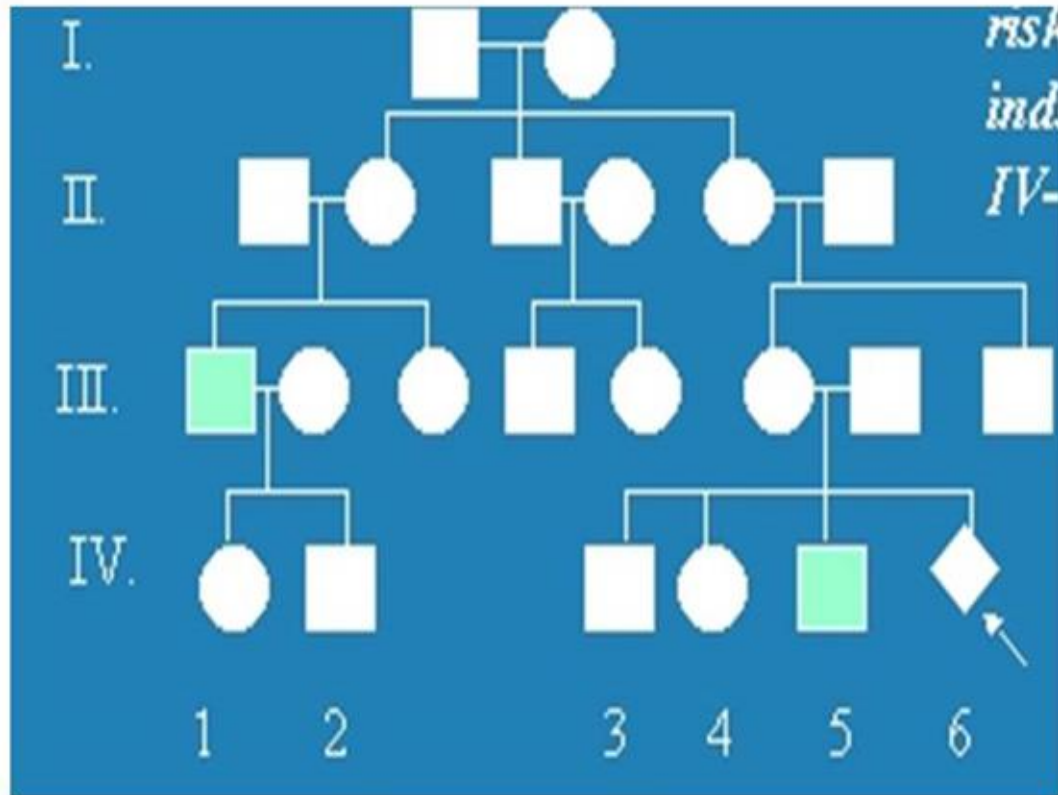
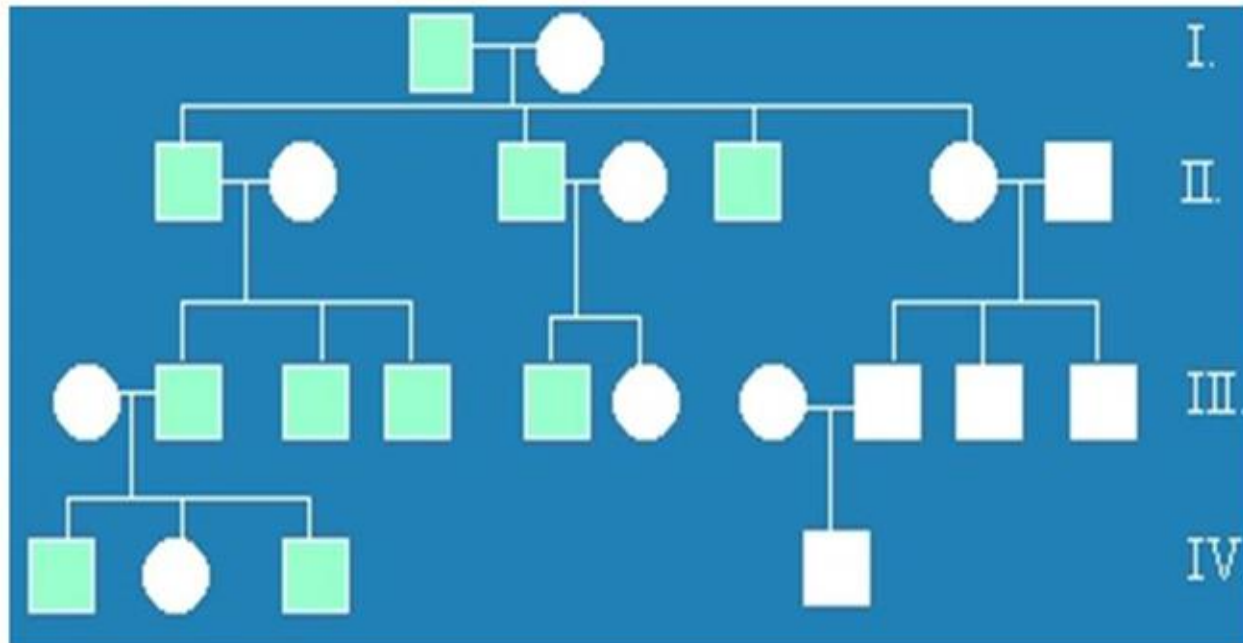


What is the mode of inheritance?



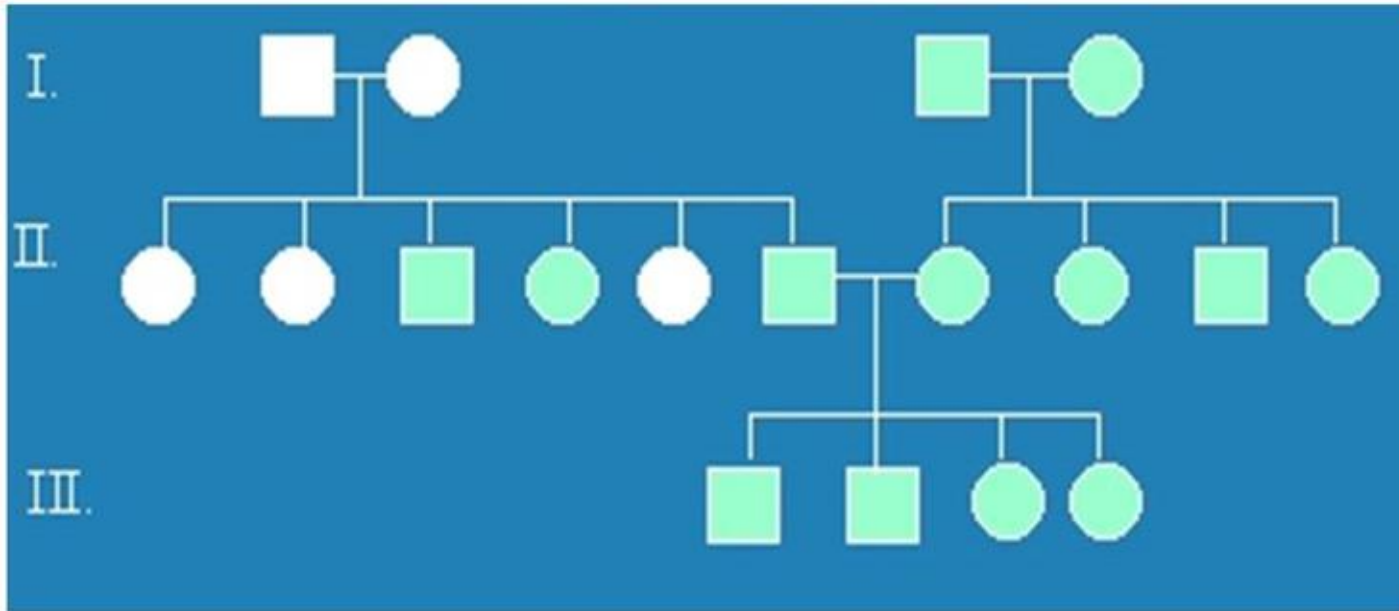
- It is skipping generations, which suggests recessive inheritance.
- However, because only males are affected, no affected females are present, and the male-to-female ratio is not 1:1, this pattern is consistent with **X-linked recessive** inheritance.

What is the mode of inheritance?



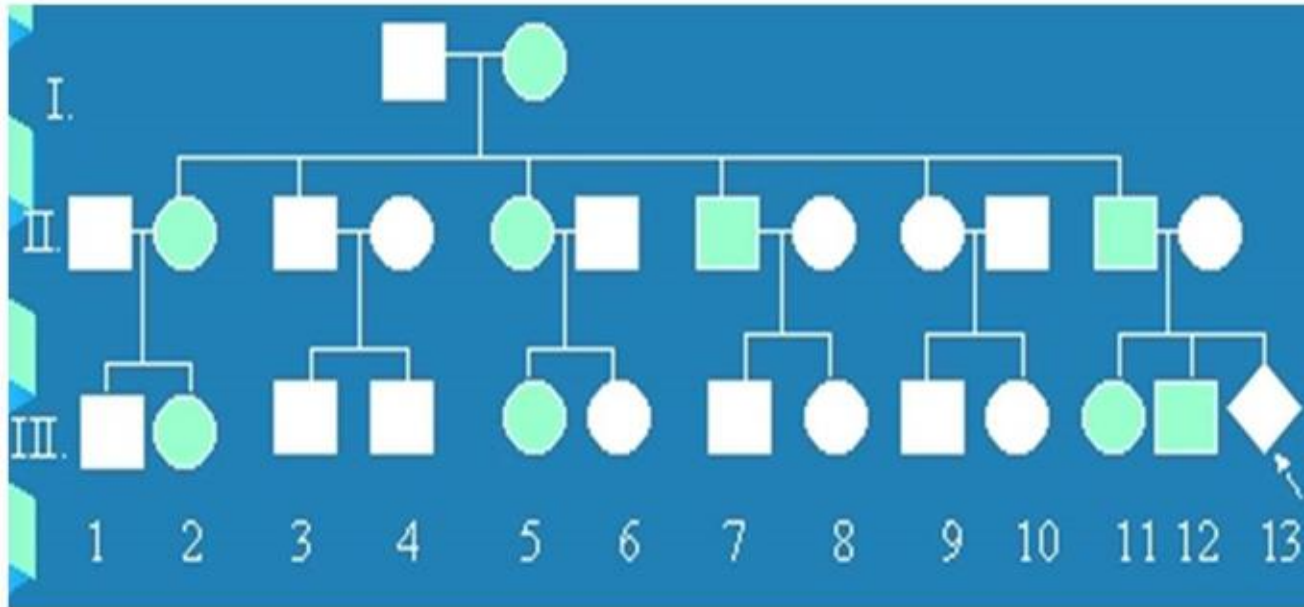
- It is **Y-linked** inheritance because all sons of an affected father are affected, indicating direct male-to-male transmission.

What is the mode of inheritance?



- A male-to-female ratio of approximately 1:1, together with healthy parents producing affected children, is characteristic of **autosomal recessive** inheritance. (Most probably, not definitely)

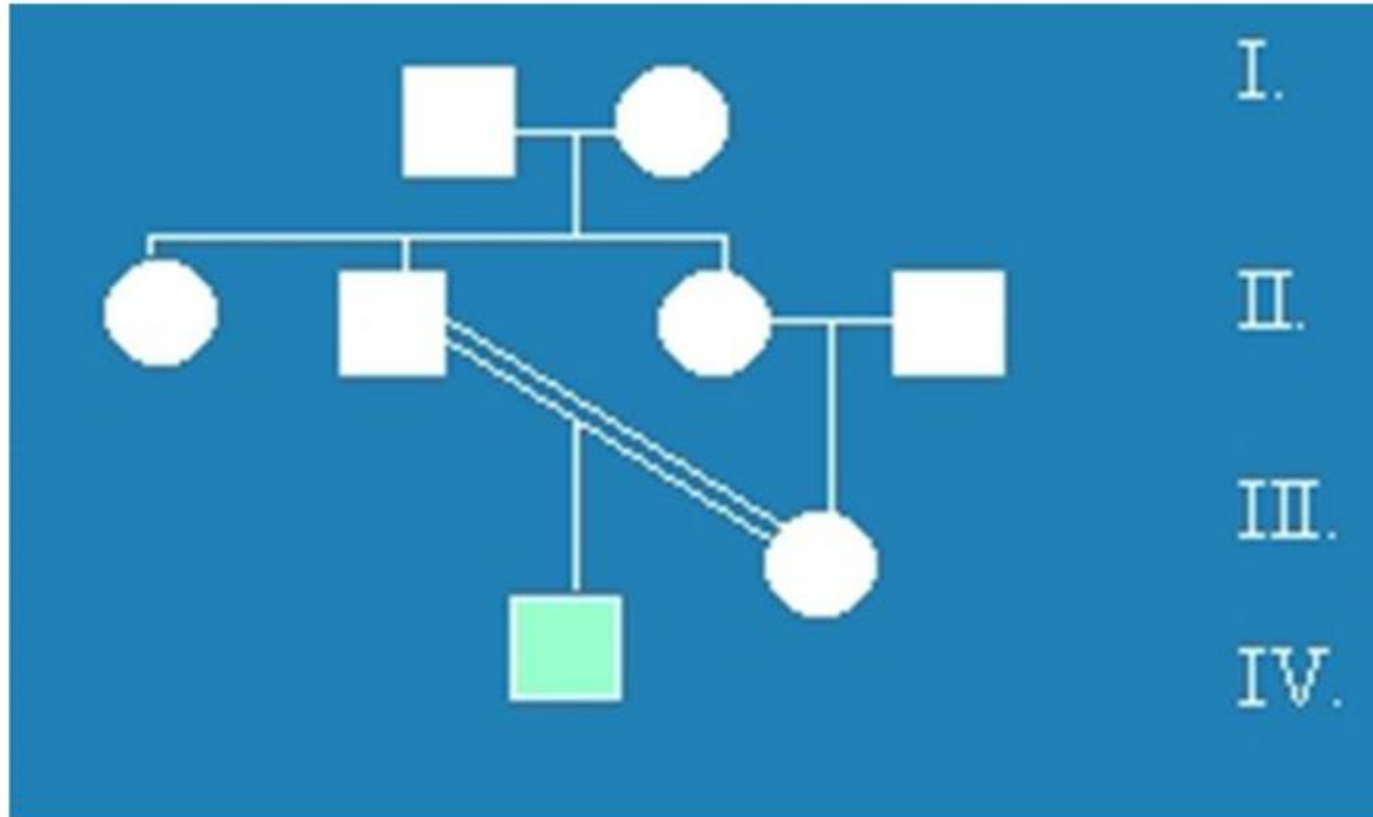
What is the mode of inheritance?



- Every generation is affected, indicating autosomal dominant inheritance.
- Although the male-to-female ratio is not 1:1, suggesting possible X-linked dominant inheritance, this is excluded because an affected father has an unaffected daughter (8), and an affected son (12) has an unaffected mother. Therefore, the inheritance pattern is **autosomal dominant**.

✓ *In autosomal dominant diseases, the male-to-female ratio is typically approximately 1:1; however, this does not necessarily imply an exact 1:1 ratio in every individual family.*

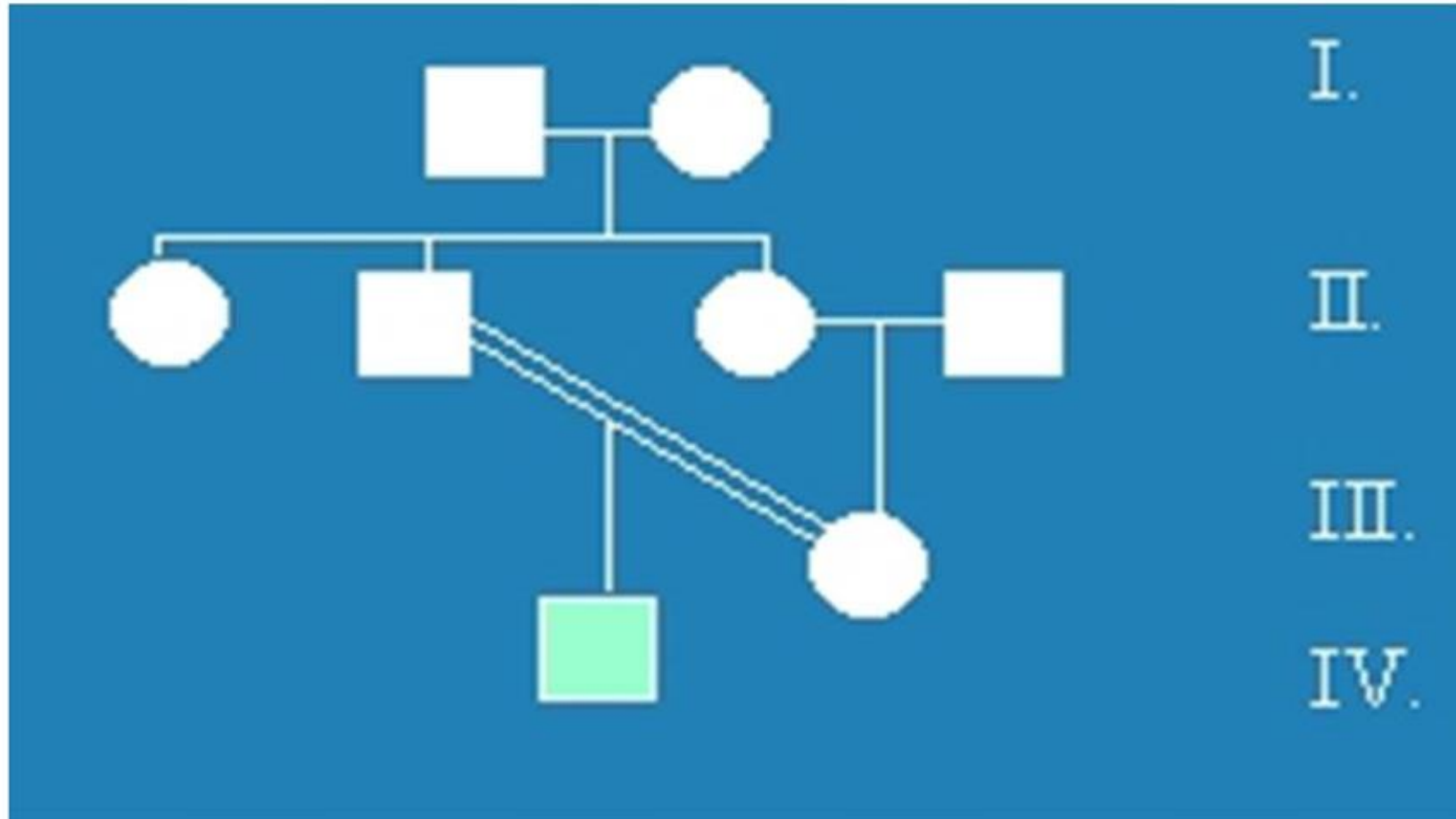
What is the mode of inheritance?



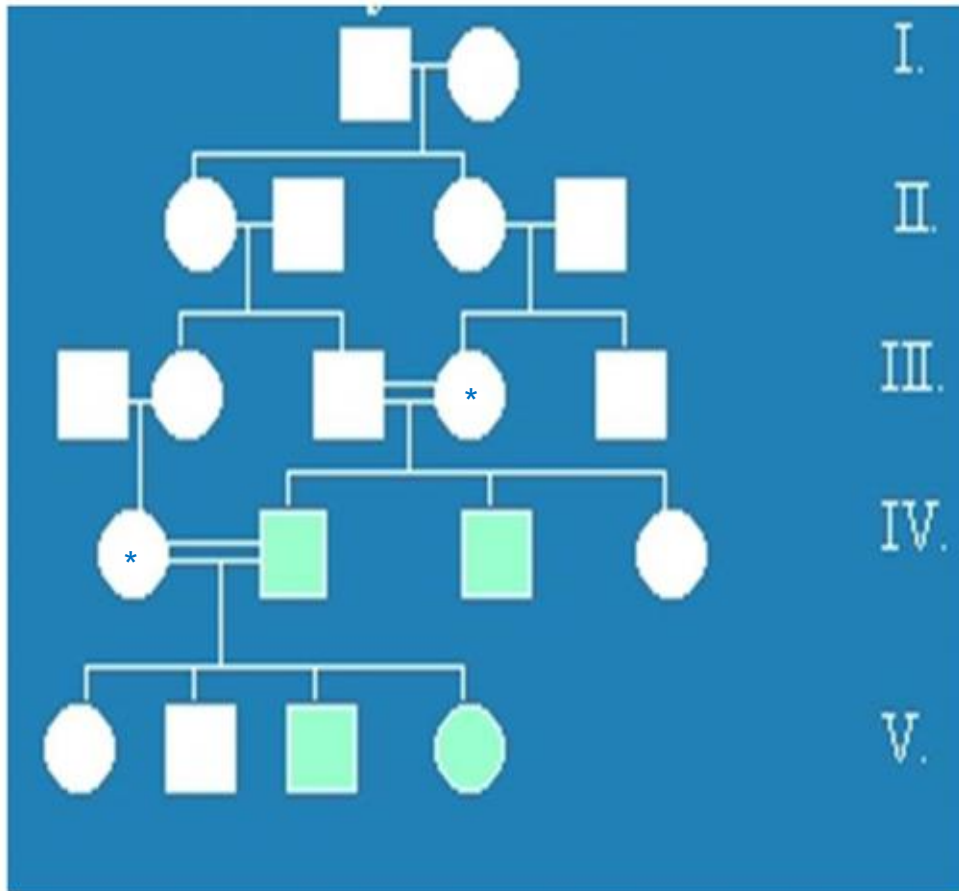
- **Autosomal recessive** inheritance is most likely. The parents are unaffected, and consanguinity is present, supporting a recessive pattern.
- When analyzing pedigrees, if a recessive inheritance pattern is observed and there is no evidence suggesting X-linked inheritance, it is more likely to be autosomal recessive. This is because the majority of genes are located on autosomal chromosomes compared to the X chromosome.

What is the mode of inheritance?

Autosomal recessive



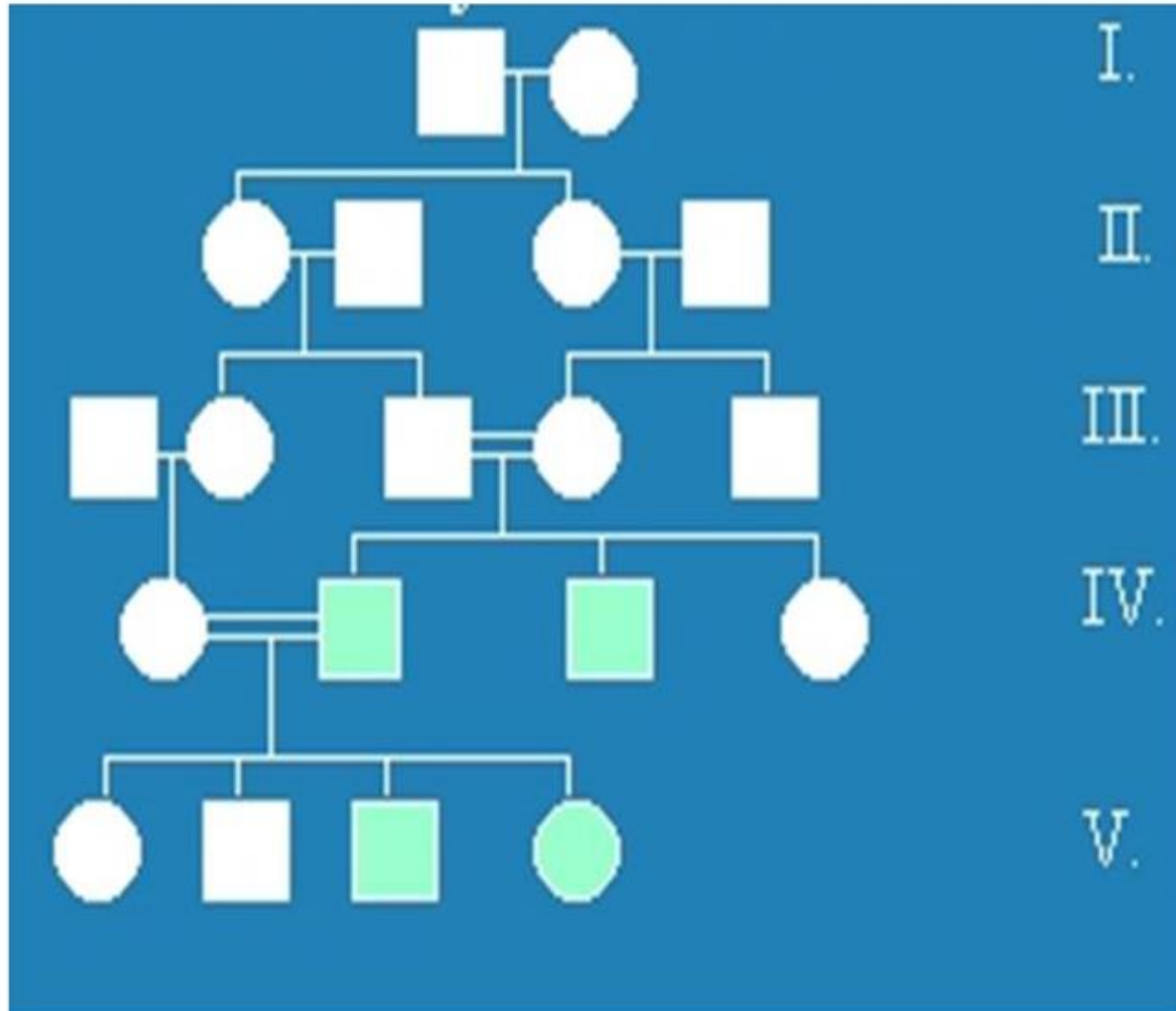
What is the mode of inheritance?




- **X-linked recessive** inheritance is suggested by skipping generations and a higher proportion of affected males compared to females (3:1).
- Both mothers * in generation 3 and generation 4 are carriers.

What is the mode of inheritance?

X-linked recessive; inbreeding shows apparent male to male transmission



رَبَّنَا
آتِنَا فِي الدُّنْيَا حَسَنَةً وَفِي الآخِرَةِ
حَسَنَةً وَقِنَا عَذَابَ النَّارِ

اذا استفدتوا، لا تنسوني من دعائكم 

The sentence about male (1) in
slide #1 was deleted

[Please click here and let me know if there's any mistake.](#)

Good Luck ☺