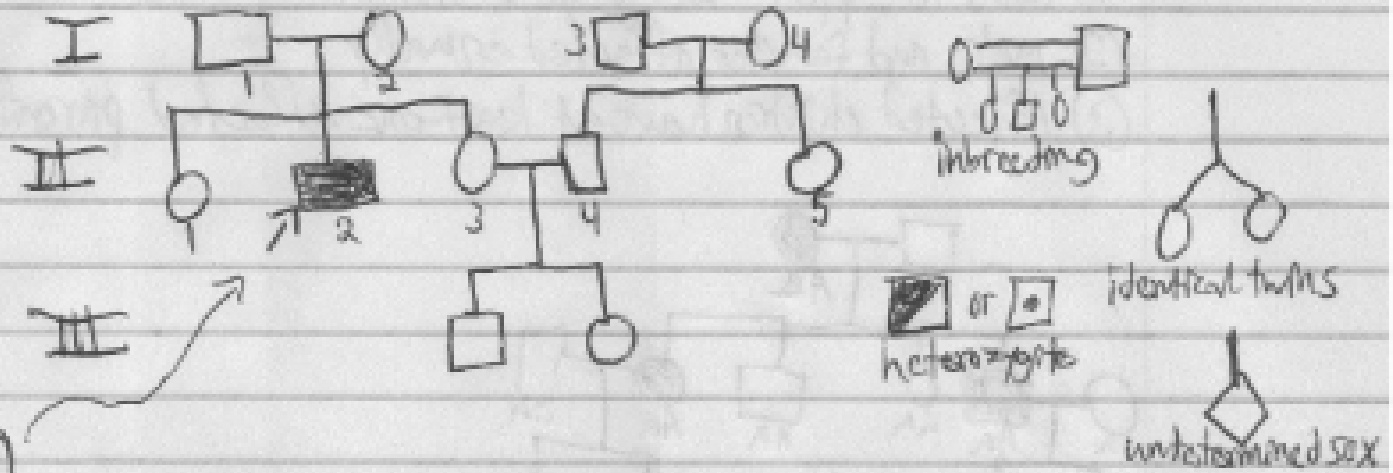


Pedigree Analysis

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□ = male ○ = female ■ = affected male ● = affected female



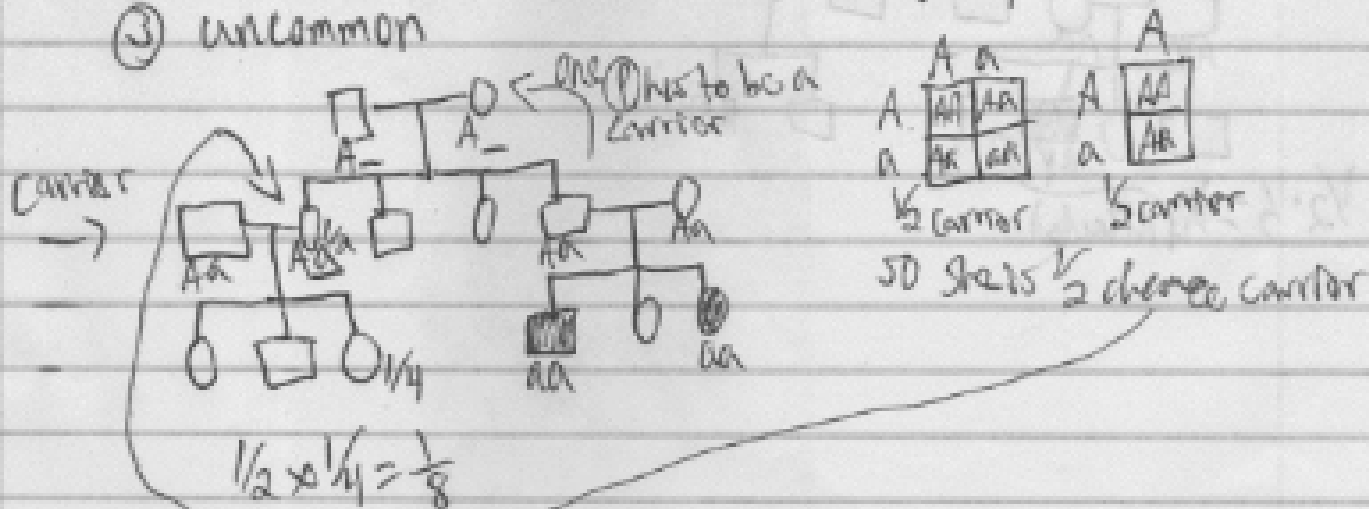
(→) **Propositus** - first individual in family w/ condition identified

Modes of Inheritance

- > Autosomal
 - dominant
 - recessive
- > Sex-Linked (x-linked)
 - dom.
 - rec.
- > Extra-nuclear - mitochondrial or chloroplast

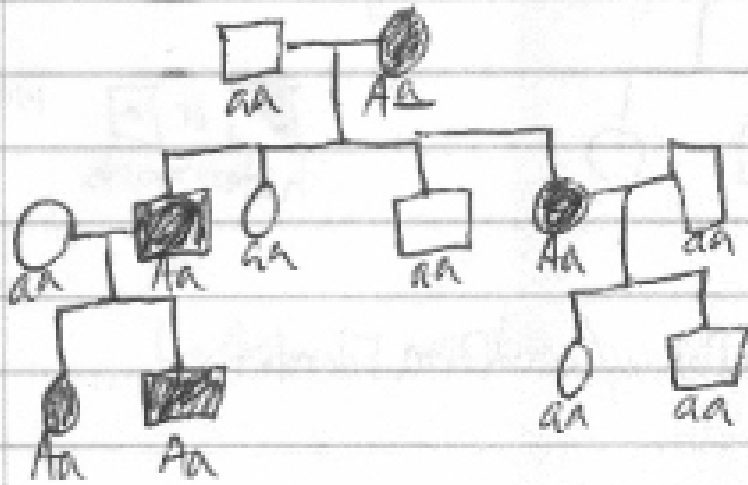
D. Autosomal recessive

- 1) generally appears in offspring of unaffected parents
- 2) females and males affected equally
- 3) uncommon



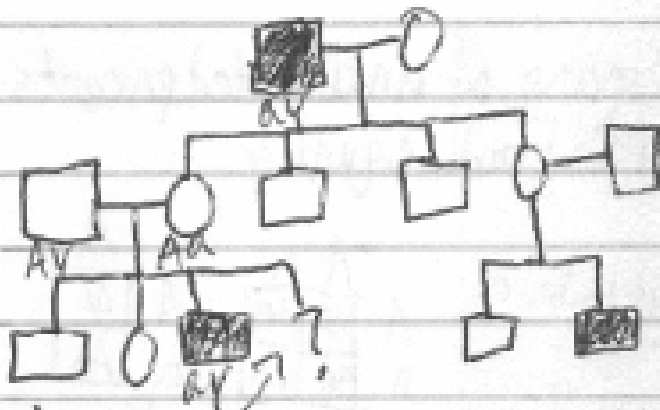
Autosomal Dominant

- ① Tends to appear in every generation of a pedigree
- ② Males and females affected equally
- ③ Affected children have at least one affected parent



Sex-Linked Recessive → skip generations

- ① Many more males than females affected
- ② Affected males have no affected sons or daughters but all daughters are carriers
- ③ Carrier mothers will have half sons affected, half of daughters will be carriers.



$$\frac{1}{2} \cdot \frac{1}{2} = \frac{1}{4} \text{ affected}$$

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Sex-Linked Dominant

- ① Affected males will have all affected daughters and no affected sons.
- ② Affected carrier females will have half affected offspring.

