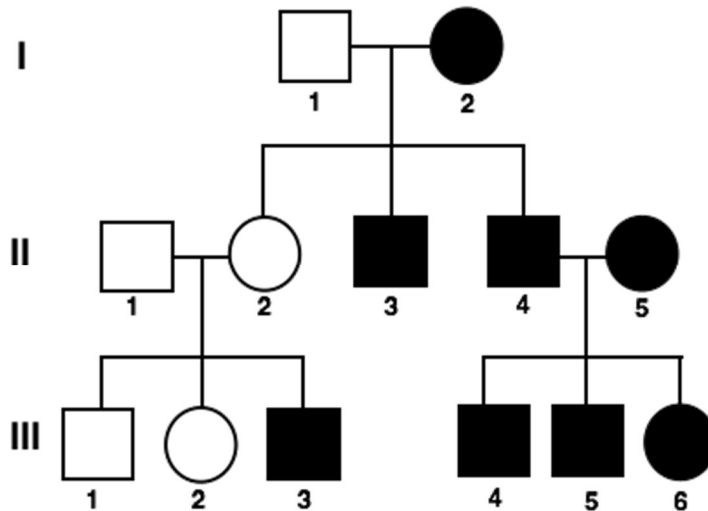


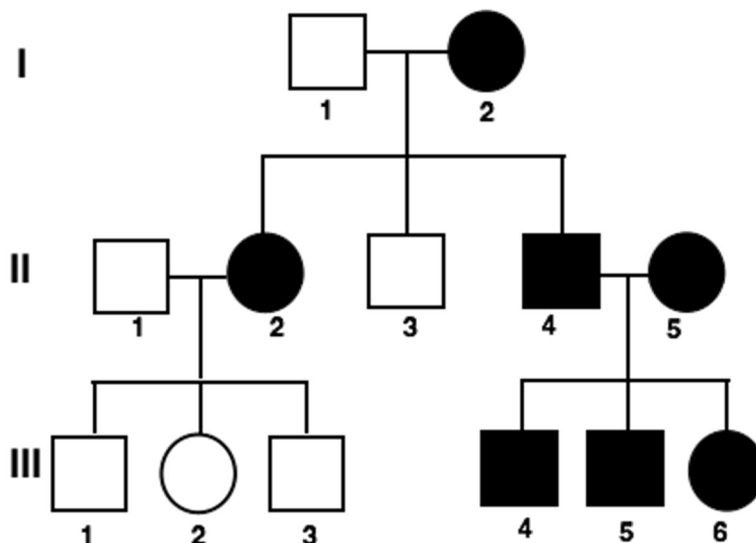
1.) The pedigree below tracks Duchenne Muscular Dystrophy (DMD) through several generations. DMD is an X-linked recessive trait.

- Deduce the genotype of individual II-2 and explain your answer.
- If individuals I-1 and I-2 had another son, what is the chance he would have DMD? Explain your answer.
- If individual II-3 has a child with a carrier woman, what is the percent chance that the child will be a daughter with DMD?



2.) The pedigree chart below tracks the presence of attached earlobes through a family's generation. Having attached earlobes is an autosomal recessive trait.

- If individuals I-1 and I-2 had a fourth child, what is the chance that the child would have attached earlobes? Explain your answer.
- What is the genotype of individual II-3? Explain your answer.



3.) The pedigree chart below tracks the presence of dimples through a family's generation. Having dimples is an autosomal dominant trait.

- a) If individual III-3 married a woman who was heterozygous for dimples, what is the percent chance their children will have dimples? Explain your answer.
- b) If individuals II-1 and II-2 have a fourth child, what is the probability that the child will have dimples?

