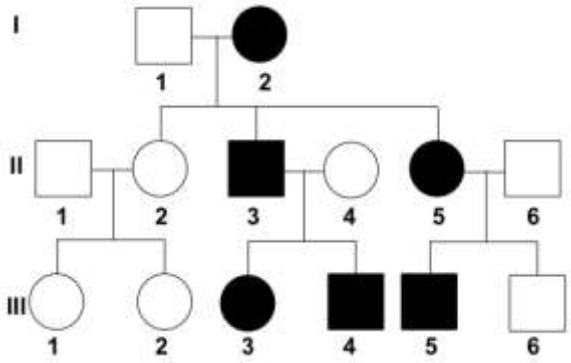
Topic 3 Learning Targets
- Analyze pedigrees to determine the type of inheritance for a trait – dominant, recessive, or sex-linked
- Create a pedigree given information about several generations of individuals

What is a pedigree?
- A tool used to analyze the pattern of inheritance of a particular trait within a family across generations
- Show the presence or absence of a trait as it relates to the relationships among parents, offspring, and siblings



Key to reading pedigrees
Generation # = roman numeral on left side
Male = square | Female = circle
Individuals with traits = shaded
Mating pairs connected horizontally | Offspring connected vertically
How to identify individual: Generation # + individual → II.3

What is an autosomal trait?
- A trait on a non-sex chromosome
- Two types
  - Autosomal dominant: Huntington's disease, attached (ee) vs. unattached earlobes (EE/Ee)
  - Autosomal recessive: Albinism, cystic fibrosis

What is a sex-linked trait?
- A trait on a sex chromosome
- Three types
  - X-linked dominant: Hypophosphatemic ricketsm Rickets (X^G) soft or weak bones in children)
  - X-linked recessive: Hemophilia (X^b)
  - Y-linked recessive: Auricular hypertrichosis (Y^e)

What does carrier mean?
- A person or other organism that has inherited a recessive allele for a genetic trait or mutation
- Previous Examples
  - Attached earlobe carrier: Ee or ee
  - Albinism carrier: Ee or ee