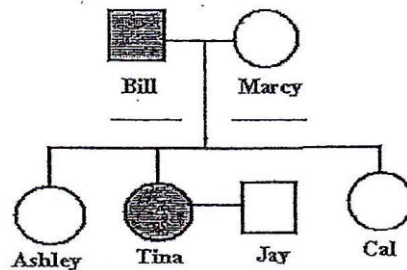


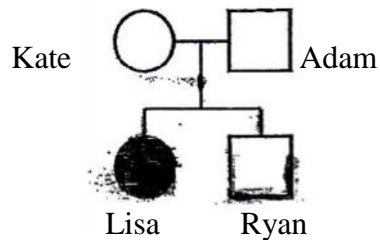
Name: _____ Period: _____ Date: _____

Pedigree & Punnetts WS

1. The pedigree below shows the occurrence of Tay-Sachs Disease, which is a recessive disease and is called by a recessive allele, t .

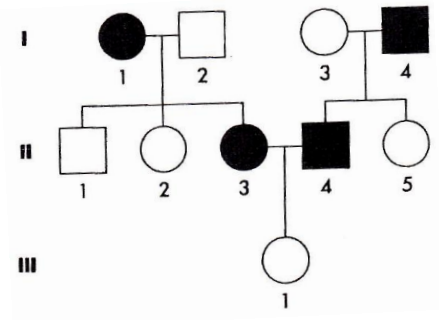


- Which family members have the disease? _____
 - What is Bill and Tina's genotype (they both have the same genotype)? _____
 - What is Marcy's genotype? _____
 - Draw a Punnett Square between Bill and Marcy
-
- What is the chance of Bill and Marcy having a child with Tay-Sachs Disease? _____
 - What is Ashley's genotype? _____
2. The pedigree below shows a pedigree for albinism, a recessive disease. Lisa is an albino.



- What is Lisa's genotype? _____
- What is Adam's genotype? _____
- What is Kate's genotype? _____
- If Lisa marries a man who is heterozygous for albinism, what is the chance of them having a child with albinism? Draw a Punnett square of Lisa and her husband below:

5. Achondroplasia, a disease in which people have an abnormal gene that causes abnormal bone growth. It is caused by a dominant allele, **A**.

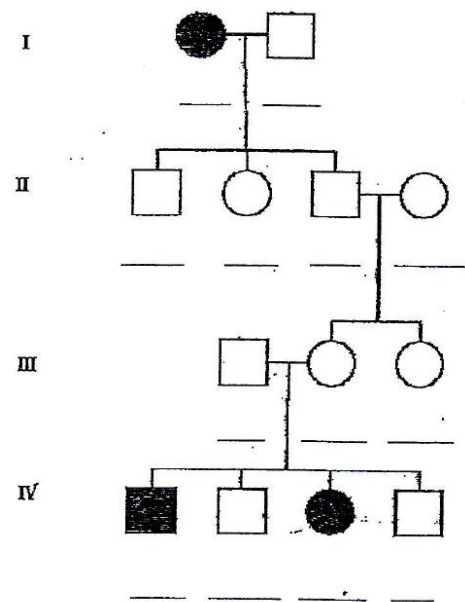


- What is individual I-2's genotype? _____
- What is individual I-1's genotype? _____
- Complete a Punnett square between individual I-1 and II-2.

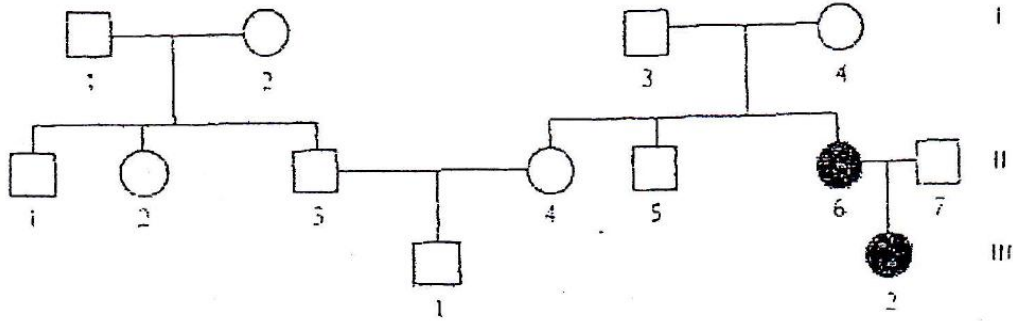
- What is the chance of them having a child with Achondroplasia? _____

6. Galactosemia is a disease in which people lack an enzyme to break down galactose (a type of sugar). People who have galactosemia have mental disabilities, an enlarged liver and kidney failure. Unfortunately, there is no cure. Galactosemia is caused by a recessive allele, **g**.

- Fill in the pedigree and below each individual, write down their genotype. If a person's second allele can either be G or g, put G__.



7. Albinism is a disease caused by a recessive allele, **a**.



- What is individual II-6's genotype? _____
- What is individual II-7's genotype? _____
- Complete a Punnett square between II-6 and II-7.

d. If the two of them have another child, what is the chance of the child being a carrier for albinism?