

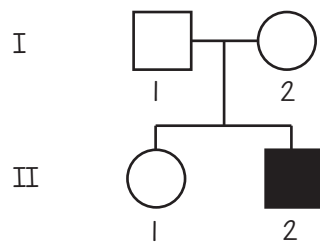
Name: _____

Class: _____

Date: _____

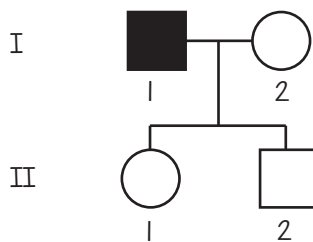
Pedigree Genetics Inferences: Autosomal Disorders

Assume in the questions below that the affected individual has an autosomal recessive disorder. Use A and a



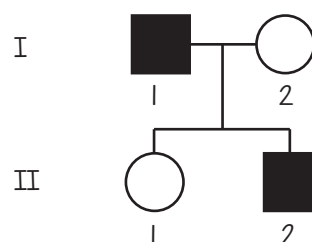
1. What is the genotype of I-1?

2. How do you know?



3. What is the genotype of II-1?

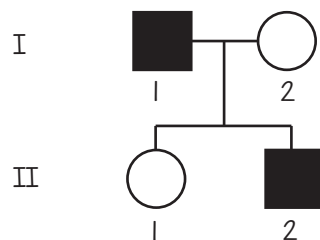
4. How do you know?



5. What is the genotype of I-2?

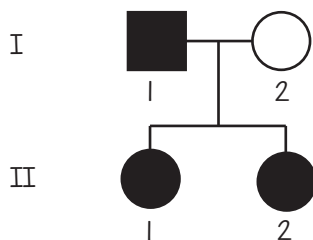
6. How do you know?

Assume in the questions below that the affected individual has an autosomal dominant disorder. Use B and b.



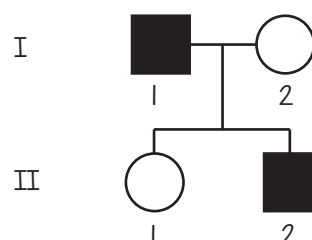
7. What is the genotype of II-1?

8. How do you know?



9. What is the genotype of II-1?

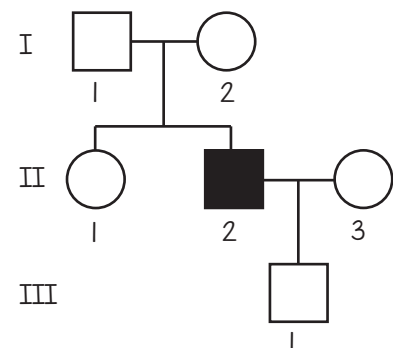
10. How do you know?



11. What is the genotype of I-1?

12. How do you know?

One pedigree shown below has a family with individuals affected by an autosomal recessive disorder. The other has a family affected by an autosomal dominant disorder. How do you know which is which? Label each pedigree with its inheritance pattern and explain your answer. REMEMBER: IF more individuals are affected, it DOES NOT mean the disorder is caused by a dominant allele. That is not a valid reason to use in your explanation.

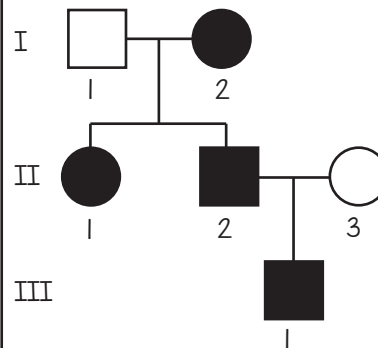


13. Inheritance Pattern:

14. How do you know?

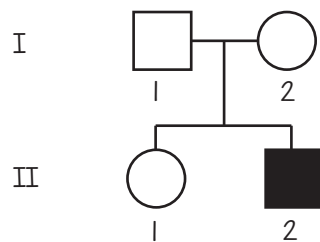
15. Inheritance Pattern:

16. How do you know?



Pedigree Genetics Inferences: Autosomal Disorders

Assume in the questions below that the affected individual has an autosomal recessive disorder. Use A and a

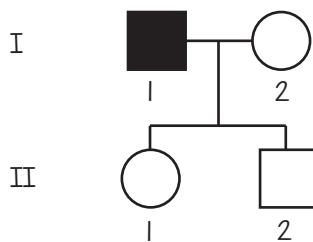


1. What is the genotype of I-1?

Aa

2. How do you know?

Because I-2 has the disorder and is aa, each parent must have at least one a.

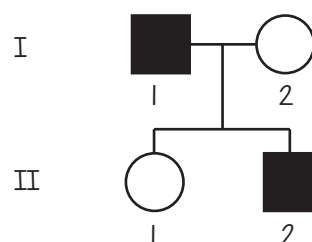


3. What is the genotype of II-1?

Aa

4. How do you know?

II-1's parent has aa, so each child must have an a.



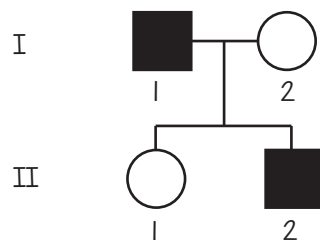
5. What is the genotype of I-2?

Aa

6. How do you know?

II-2 has aa, therefore both parents must have an a.

Assume in the questions below that the affected individual has an autosomal dominant disorder. Use B and b.

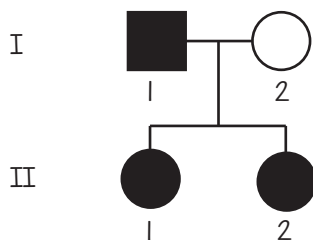


7. What is the genotype of II-1?

bb

8. How do you know?

The disorder is dominant, therefore unaffected individuals don't have a B.

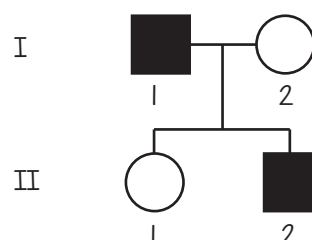


9. What is the genotype of II-1?

Bb

10. How do you know?

II-1 must have received a recessive b from parent I-2.



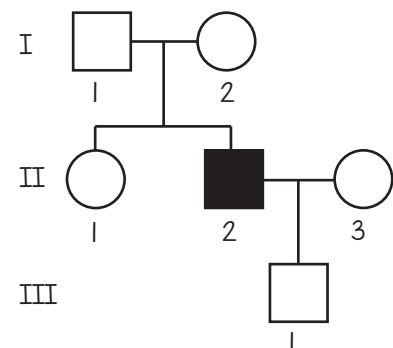
11. What is the genotype of I-1?

Bb

12. How do you know?

Because II-1 has two b alleles, affected parent I-1 must have one b allele.

One pedigree shown below has a family with individuals affected by an autosomal recessive disorder. The other has a family affected by an autosomal dominant disorder. How do you know which is which? Label each pedigree with its inheritance pattern and explain your answer. REMEMBER: IF more individuals are affected, it DOES NOT mean the disorder is caused by a dominant allele. That is not a valid reason to use in your explanation.



13. Inheritance Pattern:

recessive

14. How do you know?

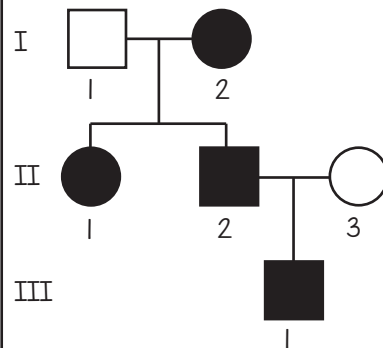
Because there is an affected child with two unaffected parents, you know that it is recessive.

15. Inheritance Pattern:

dominant

16. How do you know?

Every affected child has an affected parent. (Technically this could still show a common recessive disorder)

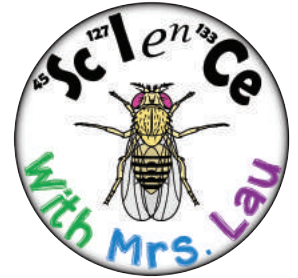


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