1. Which members of the family above are afflicted with Huntington’s Disease? ________________________________

2. There are no carriers for Huntington’s Disease—you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ________________________________

3. How many children did individuals I-1 and I-2 have? ________________________________

4. How many girls did II-1 and II-2 have? How many have Huntington’s Disease? ________________ ________________

5. How are individuals III-2 and II-4 related? ________________________________ I-2 and III-5? ________________________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? ________________________________

7. How do you know? ________________________________

8. How are individuals III-1 and III-2 related? ________________________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? ________________________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ________________________________

11. Is it possible for individual IV-2 to be a carrier? Why? ________________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ________________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ________________________________

14. Why does individual IV-7 have colorblindness? ________________________________

15. Why do all the daughters in generation II carry the colorblind gene? ________________________________

16. Name 2 IV generation colorblind males. ________________________________
Genetics Pedigree Worksheet

A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- • female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ___________________________________
- II-1: ____________________________________
- I-1: ____________________________________
- II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? I1, II2, II3, II7, III3

2. There are no carriers for Huntington’s Disease— you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? **6**

4. How many girls did II-1 and II-2 have? **2** How many have Huntington’s Disease? **1 or 5**

5. How are individuals III-2 and II-4 related? **Uncle/Niece** I-2 and III-5? **Grandma/Grandson**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

7. How do you know? III1 and III2 do not have it but their children do.

8. How are individuals III-1 and III-2 related? **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb? **IV1 and IV3**

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. **III1 and III2**

11. Is it possible for individual IV-2 to be a carrier? **Yes** Why? **b/c parents were heterozygous**

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness? **b/c mom was a carrier and dad was affected**

15. Why do all the daughters in generation II carry the colorblind gene? **b/c dad was affected and its on the X**

16. Name 2 IV generation colorblind males. **IV1, IV5**
1. Which members of the family above are afflicted with Huntington’s Disease? __________________________

2. There are no carriers for Huntington’s Disease - you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? __________________________

3. How many children did individuals I-1 and I-2 have? __________________________

4. How many girls did II-1 and II-2 have? _______ _______ How many have Huntington’s Disease? _______ _______

5. How are individuals III-2 and II-4 related? __________________________ I-2 and III-5? __________________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? __________________________

7. How do you know? __________________________

8. How are individuals III-1 and III-2 related? __________________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? __________________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. __________________________

11. Is it possible for individual IV-2 to be a carrier? __________________________ Why? __________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? __________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? __________________________

14. Why does individual IV-7 have colorblindness? __________________________

15. Why do all the daughters in generation II carry the colorblind gene? __________________________

16. Name 2 IV generation colorblind males. __________
Genetics Pedigree Worksheet

A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above. (homozygous dominant, homozygous recessive, heterozygous)

- III-3: ________________________________
- II-1: ________________________________
- I-1: ________________________________
- II-4: ________________________________

1. Is this trait dominant or recessive? Explain your answer.
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?
   ________________________________________________________________
   ________________________________________________________________
   ________________________________________________________________

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? **I1, II2, II3, II7, III3**

2. There are no carriers for Huntington’s Disease - you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? **6**

4. How many girls did II-1 and II-2 have? **2** How many have Huntington’s Disease? **1 or 5**

5. How are individuals III-2 and II-4 related? **Uncle/Niece**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

7. How do you know? **III1 and III2 do not have it but their children do.**

8. How are individuals III-1 and III-2 related? **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb? **IV1 and IV3**

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. **III1 and III2**

11. Is it possible for individual IV-2 to be a carrier? **Yes** Why? **b/c parents were heterozygous**

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness? **b/c mom was a carrier and dad was affected**

15. Why do all the daughters in generation II carry the colorblind gene? **b/c dad was affected and it’s on the X**

16. Name 2 IV generation colorblind males. **IV1, IV5**
1. Which members of the family above are afflicted with Huntington’s Disease? ________________________________

2. There are no carriers for Huntington’s Disease - you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ________________________________

3. How many children did individuals I-1 and I-2 have? _______________________________________________

4. How many girls did II-1 and II-2 have? _________ _______ How many have Huntington’s Disease? _________ _______

5. How are individuals III-2 and II-4 related? ____________________ I-2 and III-5? ______________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? ________________________________

7. How do you know? ________________________________________________

8. How are individuals III-1 and III-2 related? ________________________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? ________________________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ________________________________

11. Is it possible for individual IV-2 to be a carrier? ___________ Why? __________________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ________________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ________________________________

14. Why does individual IV-7 have colorblindness? ________________________________________________

15. Why do all the daughters in generation II carry the colorblind gene? ________________________________

16. Name 2 IV generation colorblind males. ___________
Genetics Pedigree Worksheet

A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ∙ female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

---

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ___________________________________
- II-1: ____________________________________
- I-1: ____________________________________
- II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
Pedigree Worksheet  **KEY**

1. Which members of the family above are afflicted with Huntington’s Disease? **I1, II2, II3, II7, III3**

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? **6**

4. How many girls did II-1 and II-2 have? **2** How many have Huntington’s Disease? **1 or 5**

5. How are individuals III-2 and II-4 related? **Uncle/Niece** I-2 and III-5? **Grandma/Grandson**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

7. How do you know? **III1 and III2 do not have it but their children do.**

8. How are individuals III-1 and III-2 related? **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb? **IV1 and IV3**

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. **III1 and III2**

11. Is it possible for individual IV-2 to be a carrier? **Yes** Why? **b/c parents were heterozygous**

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness? **b/c mom was a carrier and dad was affected**

15. Why do all the daughters in generation II carry the colorblind gene? **b/c dad was affected and its on the X**

16. Name 2 IV generation colorblind males. **IV1, IV5**
1. Which members of the family above are afflicted with Huntington’s Disease? ____________________________

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ____________________________

3. How many children did individuals I-1 and I-2 have? ___________________________________________

4. How many girls did II-1 and II-2 have? ___________ How many have Huntington’s Disease? ___________

5. How are individuals III-2 and II-4 related? ___________________ I-2 and III-5? ___________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? ___________________________

7. How do you know? ___________________________________________

8. How are individuals III-1 and III-2 related? ___________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? ___________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ___________________________

11. Is it possible for individual IV-2 to be a carrier? ___________ Why? ___________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ___________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ___________________________

14. Why does individual IV-7 have colorblindness? ___________________________

15. Why do all the daughters in generation II carry the colorblind gene? ___________________________

16. Name 2 IV generation colorblind males. ___________
A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above. (homozygous dominant, homozygous recessive, heterozygous)

- III-3: ___________________________________
- II-1: ____________________________________
- I-1: ____________________________________
- II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.

   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? I1, II2, II3, II7, III3

2. There are no carriers for Huntington’s Disease - you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? Dominant

3. How many children did individuals I-1 and I-2 have? 6

4. How many girls did II-1 and II-2 have? 2 How many have Huntington’s Disease? 1 or 5

5. How are individuals III-2 and II-4 related? Uncle/Niece 1-2 and III-5? Grandma/Grandson

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? Recessive

7. How do you know? III1 and III2 do not have it but their children do.

8. How are individuals III-1 and III-2 related? Cousins/Marriage

9. How would you name the 2 individuals that have hitchhiker’s thumb? IV1 and IV3

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. III1 and III2

11. Is it possible for individual IV-2 to be a carrier? Yes Why? b/c parents were heterozygous

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? Females

13. With this in mind, what kind of trait is colorblindness (use your notes)? Sexlinked/recessive

14. Why does individual IV-7 have colorblindness? b/c mom was a carrier and dad was affected

15. Why do all the daughters in generation II carry the colorblind gene? b/c dad was affected and its on the X

16. Name 2 IV generation colorblind males. IV1, IV5
1. Which members of the family above are afflicted with Huntington’s Disease? ______________________________________

2. There are no carriers for Huntington’s Disease - you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ______________________________________

3. How many children did individuals I-1 and I-2 have? ______________________________________

4. How many girls did II-1 and II-2 have? _________ How many have Huntington’s Disease? _________

5. How are individuals III-2 and II-4 related? ____________________ I-2 and III-5? _______________ __________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? _______________________

7. How do you know? _________________________

8. How are individuals III-1 and III-2 related? ______________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? ______________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ______________

11. Is it possible for individual IV-2 to be a carrier? ___________ Why? ____________________________ __________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ______________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ______________________

14. Why does individual IV-7 have colorblindness? ______________

15. Why do all the daughters in generation II carry the colorblind gene? ______________

16. Name 2 IV generation colorblind males. __________
A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above. (homozygous dominant, homozygous recessive, heterozygous)

- III-3: ___________________________________
- II-1: ____________________________________
- I-1: ____________________________________
- II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?
   __________________________________________________________
   __________________________________________________________

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? I1, II2, II3, II7, III3

2. There are no carriers for Huntington’s Disease- you either have it or you don’t.
   With this in mind, is Huntington’s disease caused by a dominant or recessive trait? Dominant

3. How many children did individuals I-1 and I-2 have? 6

4. How many girls did II-1 and II-2 have? 2
   How many have Huntington’s Disease? 1 or 5

5. How are individuals III-2 and II-4 related? Uncle/Niece
   I-2 and III-5? Grandma/Grandson

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? Recessive

7. How do you know? III1 and III2 do not have it but their children do.

8. How are individuals III-1 and III-2 related? Cousins/Marriage

9. How would you name the 2 individuals that have hitchhiker’s thumb? IV1 and IV3

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. III1 and III2

11. Is it possible for individual IV-2 to be a carrier? Yes
    Why? b/c parents were heterozygous

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? Females

13. With this in mind, what kind of trait is colorblindness (use your notes)? Sexlinked/recessive

14. Why does individual IV-7 have colorblindness? b/c mom was a carrier and dad was affected

15. Why do all the daughters in generation II carry the colorblind gene? b/c dad was affected and it’s on the X

16. Name 2 IV generation colorblind males. IV1, IV5
1. Which members of the family above are afflicted with Huntington’s Disease? 

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. 
With this in mind, is Huntington’s disease caused by a dominant or recessive trait? 

3. How many children did individuals I-1 and I-2 have? 

4. How many girls did II-1 and II-2 have? How many have Huntington’s Disease? 

5. How are individuals III-2 and II-4 related? I-2 and III-5? 

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? 

7. How do you know? 

8. How are individuals III-1 and III-2 related? 

9. How would you name the 2 individuals that have hitchhiker’s thumb? 

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. 

11. Is it possible for individual IV-2 to be a carrier? Why? 

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? 

13. With this in mind, what kind of trait is colorblindness (use your notes)? 

14. Why does individual IV-7 have colorblindness? 

15. Why do all the daughters in generation II carry the colorblind gene? 

16. Name 2 IV generation colorblind males.
Genetics Pedigree Worksheet

A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)
- • III-3: ___________________________________
- • II-1: ____________________________________
- • I-1: ____________________________________
- • II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? **I1, II2, II3, II7, III3**

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? **6**

4. How many girls did II-1 and II-2 have? **2** How many have Huntington’s Disease? **1 or 5**

5. How are individuals III-2 and II-4 related? **Uncle/Niece** I-2 and III-5? **Grandma/Grandson**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

7. How do you know? **III1 and III2 do not have it but their children do.**

8. How are individuals III-1 and III-2 related? **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb? **IV1 and IV3**

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. **III1 and III2**

11. Is it possible for individual IV-2 to be a carrier? **Yes** Why? **b/c parents were heterozygous**

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness? **b/c mom was a carrier and dad was affected**

15. Why do all the daughters in generation II carry the colorblind gene? **b/c dad was affected and its on the X**

16. Name 2 IV generation colorblind males. **IV1, IV5**
1. Which members of the family above are afflicted with Huntington’s Disease? ____________________________

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ____________________________

3. How many children did individuals I-1 and I-2 have? ____________________________________________

4. How many girls did II-1 and II-2 have? _________ How many have Huntington’s Disease? _________

5. How are individuals III-2 and II-4 related? ____________________ I-2 and III-5? ____________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? ____________________________

7. How do you know? ____________________________

8. How are individuals III-1 and III-2 related? ____________________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? ____________________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ____________________________

11. Is it possible for individual IV-2 to be a carrier? ____________________________ Why? ____________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ____________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ____________________________

14. Why does individual IV-7 have colorblindness? ____________________________

15. Why do all the daughters in generation II carry the colorblind gene? ____________________________

16. Name 2 IV generation colorblind males. ____________________________
A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

- III-3: __________________________
- II-1: __________________________
- I-1: __________________________
- II-4: __________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? \(\text{II1, II2, II3, II7, III3}\)

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? \(\text{Dominant}\)

3. How many children did individuals I-1 and I-2 have? \(\text{6}\)

4. How many girls did II-1 and II-2 have? \(\text{2}\) How many have Huntington’s Disease? \(\text{1 or 5}\)

5. How are individuals III-2 and II-4 related? \(\text{Uncle/Niece}\)

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? \(\text{Recessive}\)

7. How do you know? \(\text{III1 and III2 do not have it but their children do.}\)

8. How are individuals III-1 and III-2 related? \(\text{Cousins/Marriage}\)

9. How would you name the 2 individuals that have hitchhiker’s thumb? \(\text{IV1 and IV3}\)

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. \(\text{III1 and III2}\)

11. Is it possible for individual IV-2 to be a carrier? \(\text{Yes}\) Why? \(\text{b/c parents were heterozygous}\)

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? \(\text{Females}\)

13. With this in mind, what kind of trait is colorblindness (use your notes)? \(\text{Sexlinked/recessive}\)

14. Why does individual IV-7 have colorblindness? \(\text{b/c mom was a carrier and dad was affected}\)

15. Why do all the daughters in generation II carry the colorblind gene? \(\text{b/c dad was affected and its on the X}\)

16. Name 2 IV generation colorblind males. \(\text{IV1, IV5}\)
1. Which members of the family above are afflicted with Huntington’s Disease?

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait?

3. How many children did individuals I-1 and I-2 have?

4. How many girls did II-1 and II-2 have? How many have Huntington’s Disease?

5. How are individuals III-2 and II-4 related? I-2 and III-5?

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive?

7. How do you know?

8. How are individuals III-1 and III-2 related?

9. How would you name the 2 individuals that have hitchhiker’s thumb?

10. Name the 2 individuals that were carriers of hitchhiker’s thumb.

11. Is it possible for individual IV-2 to be a carrier? Why?

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it?

13. With this in mind, what kind of trait is colorblindness (use your notes)?

14. Why does individual IV-7 have colorblindness?

15. Why do all the daughters in generation II carry the colorblind gene?

16. Name 2 IV generation colorblind males.
A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- Female, unaffected
- Female, affected
- Male, unaffected
- Male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)
- III-3: ___________________________________
- II-1: ____________________________________
- I-1: ____________________________________
- II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? I1, II2, II3, II7, III3

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? **6**

4. How many girls did II-1 and II-2 have? **2** How many have Huntington’s Disease? **1 or 5**

5. How are individuals III-2 and II-4 related? **Uncle/Niece** I-2 and III-5? **Grandma/Grandson**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

7. How do you know? III1 and III2 do not have it but their children do.

8. How are individuals III-1 and III-2 related? **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb? IV1 and IV3

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. **III1 and III2**

11. Is it possible for individual IV-2 to be a carrier? **Yes** Why? b/c parents were heterozygous

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness? b/c mom was a carrier and dad was affected

15. Why do all the daughters in generation II carry the colorblind gene? b/c dad was affected and its on the X

16. Name 2 IV generation colorblind males. **IV1, IV5**
1. Which members of the family above are afflicted with Huntington’s Disease? ________________________________

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ________________________________

3. How many children did individuals I-1 and I-2 have? ________________________________

4. How many girls did II-1 and II-2 have? _________ How many have Huntington’s Disease? _________

5. How are individuals III-2 and II-4 related? ________________________________ I-2 and III-5? ________________________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? ________________________________

7. How do you know? ________________________________

8. How are individuals III-1 and III-2 related? ________________________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? ________________________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ________________________________

11. Is it possible for individual IV-2 to be a carrier? ___________ Why? ________________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ________________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ________________________________

14. Why does individual IV-7 have colorblindness? ________________________________

15. Why do all the daughters in generation II carry the colorblind gene? ________________________________

16. Name 2 IV generation colorblind males. ___________
Genetics Pedigree Worksheet

A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- female, unaffected
- female, affected
- male, unaffected
- male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

---

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ____________________________
- II-1: ____________________________
- I-1: ____________________________
- II-4: ____________________________

1. Is this trait dominant or recessive? Explain your answer.

   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? **II1, II2, III3**

2. There are no carriers for Huntington’s Disease - you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? **6**

4. How many girls did II-1 and II-2 have? **2** How many have Huntington’s Disease? **1 or 5**

5. How are individuals III-2 and II-4 related? **Uncle/Niece**!

6. How are individuals III-2 and II-4 related? **Uncle/Niece**

7. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

8. How do you know? **III1 and III2 do not have it but their children do.**

9. How are individuals III-1 and III-2 related? **Cousins/Marriage**

10. How would you name the 2 individuals that have hitchiker’s thumb? **IV1 and IV3**

11. Name the 2 individuals that were carriers of hitchiker’s thumb. **III1 and III2**

12. Is it possible for individual IV-2 to be a carrier? Yes **Why? b/c parents were heterozygous**

13. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

14. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

15. Why does individual IV-7 have colorblindness? **b/c mom was a carrier and dad was affected**

16. Why do all the daughters in generation II carry the colorblind gene? **b/c dad was affected and its on the X**

17. Name 2 IV generation colorblind males. **IV1, IV5**
Pedigree Worksheet

1. Which members of the family above are afflicted with Huntington’s Disease? 

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? 

3. How many children did individuals I-1 and I-2 have? 

4. How many girls did II-1 and II-2 have? How many have Huntington’s Disease? 

5. How are individuals III-2 and II-4 related? I-2 and III-5? 

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? 

7. How do you know? 

8. How are individuals III-1 and III-2 related? 

9. How would you name the 2 individuals that have hitchhiker’s thumb? 

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. 

11. Is it possible for individual IV-2 to be a carrier? Why? 

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? 

13. With this in mind, what kind of trait is colorblindness (use your notes)? 

14. Why does individual IV-7 have colorblindness? 

15. Why do all the daughters in generation II carry the colorblind gene? 

16. Name 2 IV generation colorblind males.
**Genetics Pedigree Worksheet**

A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

---

Try to identify the genotypes of the following individuals using the pedigree above.

(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ________________________________
- II-1: ________________________________
- I-1: ________________________________
- II-4: ________________________________

1. Is this trait dominant or recessive? Explain your answer.
   ______________________________________________________________
   ______________________________________________________________
   ______________________________________________________________

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?
   ______________________________________________________________
   ______________________________________________________________
   ______________________________________________________________

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? I1, II2, II3, II7, III3

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? Dominant

3. How many children did individuals I-1 and I-2 have? 6

4. How many girls did II-1 and II-2 have? 2 How many have Huntington’s Disease? 1 or 5

5. How are individuals III-2 and II-4 related? Uncle/Niece 1-2 and III-5? Grandma/Grandson

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? Recessive

7. How do you know? III1 and III2 do not have it but their children do.

8. How are individuals III-1 and III-2 related? Cousins/Marriage

9. How would you name the 2 individuals that have hitchhiker’s thumb? IV1 and IV3

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. III1 and III2

11. Is it possible for individual IV-2 to be a carrier? Yes Why? b/c parents were heterozygous

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? Females

13. With this in mind, what kind of trait is colorblindness (use your notes)? Sexlinked/recessive

14. Why does individual IV-7 have colorblindness? b/c mom was a carrier and dad was affected

15. Why do all the daughters in generation II carry the colorblind gene? b/c dad was affected and its on the X

16. Name 2 IV generation colorblind males. IV1, IV5
1. Which members of the family above are afflicted with Huntington’s Disease? ________________________________

2. There are no carriers for Huntington’s Disease— you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ________________________________

3. How many children did individuals I-1 and I-2 have? ________________________________

4. How many girls did II-1 and II-2 have? _________ How many have Huntington’s Disease? _________

5. How are individuals III-2 and II-4 related? ________________________________ I-2 and III-5? ________________________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? ________________________________

7. How do you know? ________________________________

8. How are individuals III-1 and III-2 related? ________________________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? ________________________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ________________________________

11. Is it possible for individual IV-2 to be a carrier? Why? ________________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ________________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ________________________________

14. Why does individual IV-7 have colorblindness? ________________________________

15. Why do all the daughters in generation II carry the colorblind gene? ________________________________

16. Name 2 IV generation colorblind males. ________________________________
Name ____________________________________

**Genetics Pedigree Worksheet**

A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born.

---

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ___________________________________
- II-1: ____________________________________
- I-1: ____________________________________
- II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
Pedigree Worksheet **KEY**

1. Which members of the family above are afflicted with Huntington’s Disease? I1, II2, II3, II7, III3

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? 6

4. How many girls did II-1 and II-2 have? 2 How many have Huntington’s Disease? 1 or 5

5. How are individuals III-2 and II-4 related? **Uncle/Niece** I-2 and III-5? **Grandma/Grandson**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

7. How do you know? III1 and III2 do not have it but their children do.

8. How are individuals III-1 and III-2 related? **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb? **IV1 and IV3**

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. **III1 and III2**

11. Is it possible for individual IV-2 to be a carrier? **Yes** Why? b/c parents were heterozygous

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness? **b/c mom was a carrier and dad was affected**

15. Why do all the daughters in generation II carry the colorblind gene? **b/c dad was affected and it’s on the X**

16. Name 2 IV generation colorblind males. **IV1, IV5**
Pedigree Worksheet

1. Which members of the family above are afflicted with Huntington’s Disease? ________________________________

2. There are no carriers for Huntington’s Disease - you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ________________________________

3. How many children did individuals I-1 and I-2 have? ____________________________________________

4. How many girls did II-1 and II-2 have? ___________ ___________ How many have Huntington’s Disease? ___________ ___________

5. How are individuals III-2 and II-4 related? ____________________________ I-1 and III-5? ____________________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? ________________________________

7. How do you know? ____________________________________________

8. How are individuals III-1 and III-2 related? ________________________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? ________________________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ________________________________

11. Is it possible for individual IV-2 to be a carrier? ________________________________ Why? ________________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ________________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ________________________________

14. Why does individual IV-7 have colorblindness? ____________________________________________

15. Why do all the daughters in generation II carry the colorblind gene? ________________________________

16. Name 2 IV generation colorblind males. ________________________________
Genetics Pedigree Worksheet

A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ____________________________
- II-1: ____________________________
- I-1: ____________________________
- II-4: ____________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
Pedigree Worksheet KEY

1. Which members of the family above are afflicted with Huntington’s Disease? I1, II2, II3, II7, III3

2. There are no carriers for Huntington’s Disease - you either have it or you don’t.
   With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? **6**

4. How many girls did II-1 and II-2 have? **2**
   How many have Huntington’s Disease? **1 or 5**

5. How are individuals III-2 and II-4 related? **Uncle/Niece**
   I-2 and III-5? **Grandma/Grandson**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

7. How do you know? **III1 and III2 do not have it but their children do.**

8. How are individuals III-1 and III-2 related? **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb? **IV1 and IV3**

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. **III1 and III2**

11. Is it possible for individual IV-2 to be a carrier? **Yes**
    Why? **b/c parents were heterozygous**

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness? **b/c mom was a carrier and dad was affected**

15. Why do all the daughters in generation II carry the colorblind gene? **b/c dad was affected and its on the X**

16. Name 2 IV generation colorblind males. **IV1, IV5**
1. Which members of the family above are afflicted with Huntington’s Disease? ________________________________

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ________________________________

3. How many children did individuals I-1 and I-2 have? _______________________________________________

4. How many girls did II-1 and II-2 have? __________ How many have Huntington’s Disease? __________

5. How are individuals III-2 and II-4 related? ______________________ I-2 and III-5? ____________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? ________________________________

7. How do you know? ________________________________

8. How are individuals III-1 and III-2 related? ________________________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? ________________________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ________________________________

11. Is it possible for individual IV-2 to be a carrier? __________ Why? ________________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ________________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ________________________________

14. Why does individual IV-7 have colorblindness? ________________________________

15. Why do all the daughters in generation II carry the colorblind gene? ________________________________

16. Name 2 IV generation colorblind males. __________
Genetics Pedigree Worksheet

A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ___________________________________
- II-1: ____________________________________
- I-1: ____________________________________
- II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? I1, II2, III3, II7

2. There are no carriers for Huntington’s Disease— you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? Dominant

3. How many children did individuals I-1 and I-2 have? 6

4. How many girls did II-1 and II-2 have? 2. How many have Huntington’s Disease? 1 or 5

5. How are individuals III-2 and II-4 related? Uncle/Niece 1-2 and III-5? Grandma/Grandson

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? Recessive

7. How do you know? III1 and III2 do not have it but their children do.

8. How are individuals III-1 and III-2 related? Cousins/Marriage

9. How would you name the 2 individuals that have hitchhiker’s thumb? IV1 and IV3

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. III1 and III2

11. Is it possible for individual IV-2 to be a carrier? Yes Why? b/c parents were heterozygous

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? Females

13. With this in mind, what kind of trait is colorblindness (use your notes)? Sexlinked/recessive

14. Why does individual IV-7 have colorblindness? b/c mom was a carrier and dad was affected

15. Why do all the daughters in generation II carry the colorblind gene? b/c dad was affected and its on the X

16. Name 2 IV generation colorblind males. IV1, IV5
1. Which members of the family above are afflicted with Huntington’s Disease?

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait?

3. How many children did individuals I-1 and I-2 have?

4. How many girls did II-1 and II-2 have? How many have Huntington’s Disease?

5. How are individuals III-2 and II-4 related? I-2 and III-5?

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive?

7. How do you know?

8. How are individuals III-1 and III-2 related?

9. How would you name the 2 individuals that have hitchhiker’s thumb?

10. Name the 2 individuals that were carriers of hitchhiker’s thumb.

11. Is it possible for individual IV-2 to be a carrier? Why?

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it?

13. With this in mind, what kind of trait is colorblindness (use your notes)?

14. Why does individual IV-7 have colorblindness?

15. Why do all the daughters in generation II carry the colorblind gene?

16. Name 2 IV generation colorblind males.
A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ___________________________________
- II-1: ____________________________________
- I-1: ____________________________________
- II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?
___________________________________________________________________________
___________________________________________________________________________
___________________________________________________________________________

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? **I1, II2, II3, II7, III3**

2. There are no carriers for Huntington’s Disease - you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? **6**

4. How many girls did II-1 and II-2 have? **2** How many have Huntington’s Disease? **1 or 5**

5. How are individuals III-2 and II-4 related? **Uncle/Niece** I-2 and III-5? **Grandma/Grandson**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

7. How do you know? **III1 and III2 do not have it but their children do.**

8. How are individuals III-1 and III-2 related? **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb? **IV1 and IV3**

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. **III1 and III2**

11. Is it possible for individual IV-2 to be a carrier? **Yes** Why? **b/c parents were heterozygous**

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness? **b/c mom was a carrier and dad was affected**

15. Why do all the daughters in generation II carry the colorblind gene? **b/c dad was affected and its on the X**

16. Name 2 IV generation colorblind males. **IV1, IV5**
1. Which members of the family above are afflicted with Huntington’s Disease? ________________________________

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ________________________________

3. How many children did individuals I-1 and I-2 have? ________________________________________________

4. How many girls did II-1 and II-2 have? __________ __________ How many have Huntington’s Disease? __________ __________

5. How are individuals III-2 and II-4 related? ____________________ I-2 and III-5? ________________________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? ________________________________

7. How do you know? ________________________________

8. How are individuals III-1 and III-2 related? ____________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? ________________________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ________________________________

11. Is it possible for individual IV-2 to be a carrier? __________ Why? ________________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ________________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ________________________________

14. Why does individual IV-7 have colorblindness? ________________________________

15. Why do all the daughters in generation II carry the colorblind gene? ________________________________

16. Name 2 IV generation colorblind males. __________
Genetics Pedigree Worksheet

A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ◯ female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

---

I

II

III

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ________________________________
- II-1: ________________________________
- I-1: ________________________________
- II-4: ________________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
Pedigree Worksheet  KEY

1. Which members of the family above are afflicted with Huntington’s Disease?  **I1, II2, II3, II7, III3**

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait?  **Dominant**

3. How many children did individuals I-1 and I-2 have?  **6**

4. How many girls did II-1 and II-2 have?  **2** How many have Huntington’s Disease?  **1 or 5**

5. How are individuals III-2 and II-4 related?  **Uncle/Niece**  I-2 and III-5?  **Grandma/Grandson**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive?  **Recessive**

7. How do you know?  **III1 and III2 do not have it but their children do.**

8. How are individuals III-1 and III-2 related?  **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb?  **IV1 and IV3**

10. Name the 2 individuals that were carriers of hitchhiker’s thumb.  **III1 and III2**

11. Is it possible for individual IV-2 to be a carrier?  **Yes**  Why?  **b/c parents were heterozygous**

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it?  **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)?  **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness?  **b/c mom was a carrier and dad was affected**

15. Why do all the daughters in generation II carry the colorblind gene?  **b/c dad was affected and its on the X**

16. Name 2 IV generation colorblind males.  **IV1, IV5**
1. Which members of the family above are afflicted with Huntington’s Disease? __________________________________________

2. There are no carriers for Huntington’s Disease— you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? __________________________________________

3. How many children did individuals I-1 and I-2 have? ______________________________________________________

4. How many girls did II-1 and II-2 have? __________ How many have Huntington’s Disease? ________________

5. How are individuals III-2 and II-4 related? ____________________ I-2 and III-5? ____________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? __________________

7. How do you know? __________________________________________

8. How are individuals III-1 and III-2 related? __________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? __________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ______________

11. Is it possible for individual IV-2 to be a carrier? ___________ Why? ____________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? __________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? __________________

14. Why does individual IV-7 have colorblindness? __________________

15. Why do all the daughters in generation II carry the colorblind gene? __________________

16. Name 2 IV generation colorblind males. __________
Genetics Pedigree Worksheet

A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above. (homozygous dominant, homozygous recessive, heterozygous)

- III-3: ___________________________________
- II-1: ____________________________________
- I-1: ____________________________________
- II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.

___________________________________________________
___________________________________________________
___________________________________________________

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

___________________________________________________
___________________________________________________
___________________________________________________

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? **I1, II2, II3, II7, III3**

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? **6**

4. How many girls did II-1 and II-2 have? **2** How many have Huntington’s Disease? **1 or 5**

5. How are individuals III-2 and II-4 related? **Uncle/Niece** I-2 and III-5? **Grandma/Grandson**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

7. How do you know? **III1 and III2 do not have it but their children do.**

8. How are individuals III-1 and III-2 related? **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb? **IV1 and IV3**

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. **III1 and III2**

11. Is it possible for individual IV-2 to be a carrier? **Yes** Why? **b/c parents were heterozygous**

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness? **b/c mom was a carrier and dad was affected**

15. Why do all the daughters in generation II carry the colorblind gene? **b/c dad was affected and its on the X**

16. Name 2 IV generation colorblind males. **IV1, IV5**
1. Which members of the family above are afflicted with Huntington’s Disease? ____________________________________________

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ___________________________________________

3. How many children did individuals I-1 and I-2 have? __________________________________________________________

4. How many girls did II-1 and II-2 have? _________ How many have Huntington’s Disease? _________

5. How are individuals III-2 and II-4 related? ____________________ I-2 and III-5? ____________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? ____________________

7. How do you know? ____________________

8. How are individuals III-1 and III-2 related? ____________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? ____________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ____________________

11. Is it possible for individual IV-2 to be a carrier? ___________ Why? ____________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ____________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ____________________

14. Why does individual IV-7 have colorblindness? ____________________

15. Why do all the daughters in generation II carry the colorblind gene? ____________________

16. Name 2 IV generation colorblind males. ___________
A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born.

Try to identify the genotypes of the following individuals using the pedigree above. (homozygous dominant, homozygous recessive, heterozygous)

- III-3: ____________________________________________
- II-1: ____________________________________________
- I-1: ____________________________________________
- II-4: ____________________________________________

1. Is this trait dominant or recessive? Explain your answer.
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? **II1, II2, III1, II7, III3**

2. There are no carriers for Huntington’s Disease - you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? **6**

4. How many girls did II-1 and II-2 have? **2** How many have Huntington’s Disease? **1 or 5**

5. How are individuals III-2 and II-4 related? **Uncle/Niece**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

7. How do you know? **III1 and III2 do not have it but their children do.**

8. How are individuals III-1 and III-2 related? **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb? **IV1 and IV3**

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. **III1 and III2**

11. Is it possible for individual IV-2 to be a carrier? **Yes** Why? **b/c parents were heterozygous**

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness? **b/c mom was a carrier and dad was affected**

15. Why do all the daughters in generation II carry the colorblind gene? **b/c dad was affected and its on the X**

16. Name 2 IV generation colorblind males. **IV1, IV5**
1. Which members of the family above are afflicted with Huntington’s Disease? ________________________________

2. There are no carriers for Huntington’s Disease– you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ________________________________

3. How many children did individuals I-1 and I-2 have? _______________________________________________

4. How many girls did II-1 and II-2 have? _________ _______ How many have Huntington’s Disease? _________ _______

5. How are individuals III-2 and II-4 related? ____________________ I-2 and III-5? ___________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? ________________________________

7. How do you know? ________________________________

8. How are individuals III-1 and III-2 related? __________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? __________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ______________

11. Is it possible for individual IV-2 to be a carrier? ___________ Why? ________________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ________________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ________________________________

14. Why does individual IV-7 have colorblindness? __________________

15. Why do all the daughters in generation II carry the colorblind gene? __________________

16. Name 2 IV generation colorblind males. ___________
**Genetics Pedigree Worksheet**

A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

---

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ___________________________________
- II-1: ____________________________________
- I-1: ____________________________________
- II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? I1, II2, II3, II7, III3

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? Dominant

3. How many children did individuals I-1 and I-2 have? 6

4. How many girls did II-1 and II-2 have? 2 How many have Huntington’s Disease? 1 or 5

5. How are individuals III-2 and II-4 related? Uncle/Niece I-2 and III-5? Grandma/Grandson

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? Recessive

7. How do you know? III1 and III2 do not have it but their children do.

8. How are individuals III-1 and III-2 related? Cousins/Marriage

9. How would you name the 2 individuals that have hitchhiker’s thumb? IV1 and IV3

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. III1 and III2

11. Is it possible for individual IV-2 to be a carrier? Yes Why? b/c parents were heterozygous

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? Females

13. With this in mind, what kind of trait is colorblindness (use your notes)? Sexlinked/recessive

14. Why does individual IV-7 have colorblindness? b/c mom was a carrier and dad was affected

15. Why do all the daughters in generation II carry the colorblind gene? b/c dad was affected and its on the X

16. Name 2 IV generation colorblind males. IV1, IV5
Pedigree Worksheet

1. Which members of the family above are afflicted with Huntington’s Disease? _____________________________

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? _____________________________

3. How many children did individuals I-1 and I-2 have? _______________________________________________

4. How many girls did II-1 and II-2 have? ___________ _______ How many have Huntington’s Disease? ___________ _______

5. How are individuals III-2 and II-4 related? ________________________________ I-2 and III-5? _______________ __________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? _____________________________

7. How do you know? ___________________________________________

8. How are individuals III-1 and III-2 related? __________________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? __________________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ___________________

11. Is it possible for individual IV-2 to be a carrier? ___________ Why? ____________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? _____________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? _____________________________

14. Why does individual IV-7 have colorblindness? __________________________

15. Why do all the daughters in generation II carry the colorblind gene? __________________________

16. Name 2 IV generation colorblind males. ___________
A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above.

(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ____________________________
- II-1: ____________________________
- I-1: ____________________________
- II-4: ____________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? **I1, II2, II3, II7, III3**

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? **6**

4. How many girls did II-1 and II-2 have? **2** How many have Huntington’s Disease? **1 or 5**

5. How are individuals III-2 and II-4 related? **Uncle/Niece** I-2 and III-5? **Grandma/Grandson**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

7. How do you know? **III1 and III2 do not have it but their children do.**

8. How are individuals III-1 and III-2 related? **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb? **IV1 and IV3**

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. **III1 and III2**

11. Is it possible for individual IV-2 to be a carrier? **Yes** Why? b/c parents were heterozygous

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness? **b/c mom was a carrier and dad was affected**

15. Why do all the daughters in generation II carry the colorblind gene? **b/c dad was affected and its on the X**

16. Name 2 IV generation colorblind males. **IV1, IV5**
1. Which members of the family above are afflicted with Huntington’s Disease?  

2. There are no carriers for Huntington’s Disease - you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait?  

3. How many children did individuals I-1 and I-2 have?  

4. How many girls did II-1 and II-2 have? How many have Huntington’s Disease?  

5. How are individuals III-2 and II-4 related? I-2 and III-5?  

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive?  

7. How do you know?  

8. How are individuals III-1 and III-2 related?  

9. How would you name the 2 individuals that have hitchhiker’s thumb?  

10. Name the 2 individuals that were carriers of hitchhiker’s thumb.  

11. Is it possible for individual IV-2 to be a carrier? Why?  

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it?  

13. With this in mind, what kind of trait is colorblindness (use your notes)?  

14. Why does individual IV-7 have colorblindness?  

15. Why do all the daughters in generation II carry the colorblind gene?  

16. Name 2 IV generation colorblind males.
Genetics Pedigree Worksheet

A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ▼ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ___________________________________
- II-1: ____________________________________
- I-1: ____________________________________
- II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? I1, II2, II3, II7, III3

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? Dominant

3. How many children did individuals I-1 and I-2 have? 6

4. How many girls did II-1 and II-2 have? 2 How many have Huntington’s Disease? 1 or 5

5. How are individuals III-2 and II-4 related? Uncle/Niece 1-2 and III-5? Grandma/Grandson

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? Recessive

7. How do you know? III1 and III2 do not have it but their children do.

8. How are individuals III-1 and III-2 related? Cousins/Marriage

9. How would you name the 2 individuals that have hitchhiker’s thumb? IV1 and IV3

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. III1 and III2

11. Is it possible for individual IV-2 to be a carrier? Yes Why? b/c parents were heterozygous

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? Females

13. With this in mind, what kind of trait is colorblindness (use your notes)? Sexlinked/recessive

14. Why does individual IV-7 have colorblindness? b/c mom was a carrier and dad was affected

15. Why do all the daughters in generation II carry the colorblind gene? b/c dad was affected and its on the X

16. Name 2 IV generation colorblind males. IV1, IV5
1. Which members of the family above are afflicted with Huntington’s Disease? _________________________________

2. There are no carriers for Huntington’s Disease—you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? _________________________________

3. How many children did individuals I-1 and I-2 have? _______________________________________________

4. How many girls did II-1 and II-2 have? _________ How many have Huntington’s Disease? _________

5. How are individuals III-2 and II-4 related? ____________________ I-2 and III-5? ___________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? _________________________________

7. How do you know? _________________________________

8. How are individuals III-1 and III-2 related? _________________________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? _________________________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. _________________________________

11. Is it possible for individual IV-2 to be a carrier? ____________________ Why? _________________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? _________________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? _________________________________

14. Why does individual IV-7 have colorblindness? _________________________________

15. Why do all the daughters in generation II carry the colorblind gene? _________________________________

16. Name 2 IV generation colorblind males. _________________________________
A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

---

Try to identify the genotypes of the following individuals using the pedigree above. (homozygous dominant, homozygous recessive, heterozygous)

- III-3: ___________________________________  
- II-1: ____________________________________  
- I-1: ____________________________________  
- II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? **I1, II2, II3, II7, III3**

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? **6**

4. How many girls did II-1 and II-2 have? **2**  How many have Huntington’s Disease? **1 or 5**

5. How are individuals III-2 and II-4 related? **Uncle/Niece**  I-2 and III-5? **Grandma/Grandson**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

7. How do you know? **III1 and III2 do not have it but their children do.**

8. How are individuals III-1 and III-2 related? **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb? **IV1 and IV3**

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. **III1 and III2**

11. Is it possible for individual IV-2 to be a carrier? **Yes**  Why? **b/c parents were heterozygous**

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness? **b/c mom was a carrier and dad was affected**

15. Why do all the daughters in generation II carry the colorblind gene? **b/c dad was affected and its on the X**

16. Name 2 IV generation colorblind males. **IV1, IV5**
1. Which members of the family above are afflicted with Huntington’s Disease?  

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait?  

3. How many children did individuals I-1 and I-2 have?  

4. How many girls did II-1 and II-2 have? How many have Huntington’s Disease?  

5. How are individuals III-2 and II-4 related? I-2 and III-5?  

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive?  

7. How do you know?  

8. How are individuals III-1 and III-2 related?  

9. How would you name the 2 individuals that have hitchhiker’s thumb?  

10. Name the 2 individuals that were carriers of hitchhiker’s thumb.  

11. Is it possible for individual IV-2 to be a carrier? Why?  

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it?  

13. With this in mind, what kind of trait is colorblindness (use your notes)?  

14. Why does individual IV-7 have colorblindness?  

15. Why do all the daughters in generation II carry the colorblind gene?  

16. Name 2 IV generation colorblind males.
A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ____________________________
- II-1: ____________________________
- I-1: ____________________________
- II-4: ____________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? I1, II2, II3, II7, III3

2. There are no carriers for Huntington’s Disease- you either have it or you don’t.
   With this in mind, is Huntington’s disease caused by a dominant or recessive trait? Dominant

3. How many children did individuals I-1 and I-2 have? 6

4. How many girls did II-1 and II-2 have? 2
   How many have Huntington’s Disease? 1 or 5

5. How are individuals III-2 and II-4 related? Uncle/Niece
   I-2 and III-5? Grandma/Grandson

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? Recessive

7. How do you know? III1 and III2 do not have it but their children do.

8. How are individuals III-1 and III-2 related? Cousins/Marriage

9. How would you name the 2 individuals that have hitchhiker’s thumb? IV1 and IV3

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. III1 and III2

11. Is it possible for individual IV-2 to be a carrier? Yes
   Why? b/c parents were heterozygous

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? Females

13. With this in mind, what kind of trait is colorblindness (use your notes)? Sexlinked/recessive

14. Why does individual IV-7 have colorblindness? b/c mom was a carrier and dad was affected

15. Why do all the daughters in generation II carry the colorblind gene? b/c dad was affected and its on the X

16. Name 2 IV generation colorblind males. IV1, IV5
1. Which members of the family above are afflicted with Huntington’s Disease? ____________________________

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ____________________________

3. How many children did individuals I-1 and I-2 have? ____________________________________________

4. How many girls did II-1 and II-2 have? _________ How many have Huntington’s Disease? _________

5. How are individuals III-2 and II-4 related? ________________ I-2 and III-5? ________________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? ____________________________

7. How do you know? ____________________________________________

8. How are individuals III-1 and III-2 related? ____________________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? ____________________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. ____________________________

11. Is it possible for individual IV-2 to be a carrier? Why? ____________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ____________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ____________________________

14. Why does individual IV-7 have colorblindness? ____________________________

15. Why do all the daughters in generation II carry the colorblind gene? ____________________________

16. Name 2 IV generation colorblind males. ________________
A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- • female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

• III-3: ___________________________________
• II-1: ____________________________________
• I-1: ____________________________________
• II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?
   ______________________________________________________
   ______________________________________________________
   ______________________________________________________

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? II1, II2, III1, III3

2. There are no carriers for Huntington’s Disease— you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? **Dominant**

3. How many children did individuals I-1 and I-2 have? 6

4. How many girls did II-1 and II-2 have? 2
   How many have Huntington’s Disease? 1 or 5

5. How are individuals III-2 and II-4 related? **Uncle/Niece** I-2 and III-5? **Grandma/Grandson**

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? **Recessive**

7. How do you know? III1 and III2 do not have it but their children do.

8. How are individuals III-1 and III-2 related? **Cousins/Marriage**

9. How would you name the 2 individuals that have hitchhiker’s thumb? IV1 and IV3

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. III1 and III2

11. Is it possible for individual IV-2 to be a carrier? **Yes** Why? b/c parents were heterozygous

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? **Females**

13. With this in mind, what kind of trait is colorblindness (use your notes)? **Sexlinked/recessive**

14. Why does individual IV-7 have colorblindness? b/c mom was a carrier and dad was affected

15. Why do all the daughters in generation II carry the colorblind gene? b/c dad was affected and its on the X

16. Name 2 IV generation colorblind males. IV1, IV5
1. Which members of the family above are afflicted with Huntington’s Disease? ____________________________________________

2. There are no carriers for Huntington’s Disease— you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? ____________________________________________

3. How many children did individuals I-1 and I-2 have? _________________________________________________________

4. How many girls did II-1 and II-2 have? ___________ How many have Huntington’s Disease? ________________

5. How are individuals III-2 and II-4 related? ____________________ I-2 and III-5? _______________

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? ____________________________

7. How do you know? __________________________________________

8. How are individuals III-1 and III-2 related? _______________________

9. How would you name the 2 individuals that have hitchhiker’s thumb? _______________________

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. _______________

11. Is it possible for individual IV-2 to be a carrier? _______________ Why? ____________________________

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? ____________________________

13. With this in mind, what kind of trait is colorblindness (use your notes)? ____________________________

14. Why does individual IV-7 have colorblindness? ___________________________________________________

15. Why do all the daughters in generation II carry the colorblind gene? ____________________________

16. Name 2 IV generation colorblind males. ____________
A pedigree is a chart of a person’s ancestors that is used to analyze genetic inheritance of certain traits – especially diseases. The symbols used for a pedigree are:

- ○ female, unaffected
- ● female, affected
- □ male, unaffected
- ■ male, affected

- Siblings are placed in birth order from left to right and are labeled with numbers.
- Each generation is labeled with a Roman numeral.
  - Example: we would name an individual II-3 if he/she was in the second generation and the 3rd child born

Try to identify the genotypes of the following individuals using the pedigree above.
(homozygous dominant, homozygous recessive, heterozygous)

- III-3: ___________________________________
- II-1: ____________________________________
- I-1: _____________________________________
- II-4: ____________________________________

1. Is this trait dominant or recessive? Explain your answer.

2. How can you know for sure that individuals II-3 and II-4 are heterozygous?

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Please draw a pedigree showing all four grandparents, the two parents, and the son. Indicate which individuals you are certain of their genotype and where there are more than one possibilities.
1. Which members of the family above are afflicted with Huntington’s Disease? I1, II2, II3, II7, III3

2. There are no carriers for Huntington’s Disease- you either have it or you don’t. With this in mind, is Huntington’s disease caused by a dominant or recessive trait? Dominant

3. How many children did individuals I-1 and I-2 have? 6

4. How many girls did II-1 and II-2 have? 2 How many have Huntington’s Disease? 1 or 5

5. How are individuals III-2 and II-4 related? Uncle/Niece I-2 and III-5? Grandma/Grandson

6. The pedigree to the right shows a family’s pedigree for Hitchhiker’s Thumb. Is this trait dominant or recessive? Recessive

7. How do you know? III1 and III2 do not have it but their children do.

8. How are individuals III-1 and III-2 related? Cousins/Marriage

9. How would you name the 2 individuals that have hitchhiker’s thumb? IV1 and IV3

10. Name the 2 individuals that were carriers of hitchhiker’s thumb. III1 and III2

11. Is it possible for individual IV-2 to be a carrier? Yes Why? b/c parents were heterozygous

12. The pedigree to the right shows a family’s pedigree for colorblindness. Which sex can be carriers of colorblindness and not have it? Females

13. With this in mind, what kind of trait is colorblindness (use your notes)? Sexlinked/recessive

14. Why does individual IV-7 have colorblindness? b/c mom was a carrier and dad was affected

15. Why do all the daughters in generation II carry the colorblind gene? b/c dad was affected and its on the X

16. Name 2 IV generation colorblind males. IV1, IV5