Co- & Incomplete Dominance Notesheet by C. Kohn, Waterford WI

Name: Hour Date:

Date Assignment is due: Why late? Score: + ✓ -
 Day of Week Date If your project was late, describe why

**Directions**: Use the accompanying PowerPoint ([available online](http://bit.ly/cell-resp-notes)) to complete this sheet. This is graded on a + ✓- scale.

1. What is a co-dominant trait?
2. If a horse is roan colored, it will appear from a distance but actually consists of equal

amounts of and .
3. Roan horses have a - both the red color and the

white color are .
4. Is a roan horse pink or red and white? Explain:
5. Because multiple traits are in , each

trait needs a when we use a
6. Because both traits need a , we need to use
7. In the space below, create a Punnett square to show what kind of offspring would result if we mated to roan (RW) horses:

What are the chances that these two roan horses will have a red baby? /4.

What are the chances that these two roan horses will have a white baby? /4.

What are the chances that these two roan horses will have a roan baby? /4.
8. Why is it that someone can have Type AB blood but not Type AO or Type BO blood?
9. Create a Punnett square showing what possible blood types the child of two AB parents could have.

What are the chances that they will have a baby with Type-A blood? /4.

What are the chances that they will have a baby with Type-B blood? /4.

What are the chances that they will have a baby with Type-O blood? /4.

What are the chances that they will have a baby with Type-AB blood? /4.

1. A parent suspects they received the wrong baby when they left the hospital. One parent is Type-O. The other parent is Type-B. The baby they took home has Type-AB blood. Is this their child? Defend your answer with a Punnett Square.

Did they get the wrong baby? Explain how you know:
2. Complete the Punnett square at the right for a Red Tulip and a White Tulip (if
they were incompletely dominant) and explain what their offspring would
look like.
3. Why are their offspring pink? Explain by providing the definition of ’incomplete dominance’.
4. How does the Punnett square change for cases of incomplete dominance?
5. How can you remember the difference between co-dominance and incomplete dominance?
6. If a blue parrot has babies with a red parrot, and both parents are co-dominant, what would their baby look like?
7. If a yellow fish has babies with a red fish, and both parents are incompletely dominant, what would their babies look like?
8. What is a polygene?
9. What is an example of a human polygenic trait? Explain how this is an

example:
10. Based on the example given in the slideshow, is human skin color a co-dominant trait or an incompletely

dominant trait? Explain:
11. What is epistasis?
12. How is baldness and hair color a good example of epistasis?
13. How are Labrador coat colors determined? For each kind of Labrador, explain what must occur:

Black Lab:

Chocolate Lab:

Yellow Lab:
14. What is a dihybrid Punnett square?
15. What are the steps of setting up a dihybrid Punnett square?
16. A black Labrador male (BBEE) is mated with a yellow Labrador female (bbee). What are the odds of having a chocolate Labrador puppy? First, show how to “FOIL” each parent. Then set up the Punnett square. Then state how many out of 16 would be black, chocolate, and yellow.

FOIL BBEE:

FOIL bbee:

*Complete the Punnett Square 🡺*

How many black? /16

How many chocolate? /16

How many yellow? /16
17. What is pleiotropy?
18. What is the chicken ‘frizzle’ gene?
19. How is the frizzle gene an example of pleiotropy?
20. How is sickle cell anemia an example of pleiotropy?
21. Rank yourself on each of the following

	1. I can tell the difference between co-dominance and incomplete dominance: Yes – Sort of - No
	2. I can accurately use a Punnett square for a case of co-dominance: Yes – Sort of - No
	3. I can accurately use a Punnett square for a case of incomplete dominance: Yes – Sort of - No
	4. I can understand and explain blood types and who can receive/give blood: Yes – Sort of - No
	5. I understand and can explain polygenic traits: Yes – Sort of - No
	6. I understand and can explain epistasis: Yes – Sort of - No
	7. I understand, can set-up, and can interpret dihybrid Punnett squares: Yes – Sort of - No
	8. I could use a dihybrid Punnett square to predict offspring (e.g. lab puppies): Yes – Sort of - No
	9. I understand and can explain pleiotropy and how it affects different traits: Yes – Sort of - No
	10. I could take a quiz on this unit without assistance from an instructor: Yes – Sort of - No
	11. I may need to meet with the instructor outside of class for extra help: Yes – Sort of - No

Unit Wrap-up C. Kohn, Agricultural Sciences - Waterford WI

This page is designed to help raise your grade while enabling you to develop skills you will need for after high
school. You will need to complete every question and blank in order to receive full credit for your notes. Note: if you cannot come up with a strategy to remember a difficult concept on your own, see your instructor for help.

1. What is a topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
2. What is a 2nd topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
3. What is a 3rd topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
4. Circle the most appropriate response. You will only be graded on whether or not you completed this section, so be entirely honest with yourself when completing this section.

Circle one: *I used my notes outside of class to prepare for the quiz.* Definitely – Yes – Sort of - No

Circle one: *I took extra notes in the margins for very difficult concepts.* Definitely – Yes – Sort of - No

Circle one: *I created a personal strategy for at least three difficult items.* Definitely – Yes – Sort of - No

Circle one: *I was very involved and actively studying during the quiz review.* Definitely – Yes – Sort of - No

Circle one: *I think I will be satisfied with the quiz grade I received this week.* Definitely – Yes – Sort of - No

Circle one: *I might need to meet with the instructor outside of class.* Definitely – Yes – Sort of - No