

Codominance and incomplete dominance worksheet pdf

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Incomplete and Codominance Worksheet

(Non-Mendelian monohybrid crosses)

Answer the following questions.

Show the cross and provide a Punnett square to support your answers where indicated. Express probabilities as percentages. For instance, a probability of one chance in ten would be 10%.

1. Define incomplete dominance and codominance: (remember all definitions should be in 10 words or less)

2. In some chickens, the gene for feather color is controlled by codominance. The allele for black is B and the allele for white is W. The heterozygous phenotype is known as erminette.

- What is the genotype for black chickens? _____
- What is the genotype for white chickens? _____
- What is the genotype for erminette chickens? _____

3. If two erminette chickens were crossed, what is the probability that:

Parents: _____ X _____

- They would have a black chick? _____ %
- They would have a white chick? _____ %

4. A black chicken and a white chicken are crossed. What is the probability that they will have erminette chicks? _____ %

Parents: _____ X _____

Incomplete Dominance and Codominance Practice Problems

Answer the following questions. Provide a Punnett Square to support your answers where indicated. Express probabilities as percentages.

1. Explain the difference between incomplete dominance and codominance.

2. In some children, the gene for feather color is controlled by codominance. The allele for black is B and the allele for white is W. The heterozygous phenotype is known as erminette (BW).

- What is the genotype for black children? _____
- What is the genotype for white children? _____
- What is the genotype for erminette children? _____

3. If two erminette children were crossed, what is the probability that:

- They would have a black chick? _____
- They would have a white chick? _____
- They would have a erminette chick? _____

4. A black chicken and a white chicken are crossed. What is the probability that:

- They will have a black chick? _____
- They will have a white chick? _____
- They will have a erminette chick? _____

5. In snapdragons, flower color is controlled by incomplete dominance. The white (WW). The heterozygous genotype is expressed as pink.

- What is the phenotype of a plant with the genotype WW? _____
- What is the phenotype of a plant with the genotype WW? _____
- What is the phenotype of a plant with the genotype WW? _____

6. A pink-flowered plant is crossed with a white-flowered plant. What is the probability that:

- They will have a red-flowered plant? _____
- They will have a white-flowered plant? _____
- They will have a pink-flowered plant? _____

7. What cross will produce the most pink-flowered plant? Show a Punnett Square.

McMatthews Family Genetics:
Incomplete Dominance and Codominance

Incomplete Dominance

Mrs. McMatthews, or Matthew, loves growing flowers for Mrs. McMatthews, or Martha! Her favorite flowers, Dromelicks, are found in red, blue, and purple. Use the information provided and your knowledge of incomplete dominance to complete each section below.

- Write the correct genotype for each color if R represents a red trait and B represents a blue trait.
Red: _____ Blue: _____ Purple: _____
- What would happen if Matthew McMatthews crossed a Dromelick with red flowers with a Dromelick with blue flowers? Complete the Punnett Square to determine the chances of each flower color.
 - Give the genotypes and phenotypes for the offspring.
 - What percentage of the plants would have red flowers? _____ %
 - What percentage of the plants would have purple flowers? _____ %
 - How many of the plants would have blue flowers? _____ %
- What would happen if Matthew McMatthews crossed two Dromelicks with purple flowers? Complete the Punnett Square to show the probability for each flower color.
 - Give the genotypes and phenotypes for the offspring.
 - What percentage of the plants would have red flowers? _____ %
 - What percentage of the plants would have purple flowers? _____ %
 - What percentage of the plants would have blue flowers? _____ %
- What would happen if Matthew McMatthews crossed a Dromelick with purple flowers with a Dromelick with blue flowers? Complete the Punnett Square to show the probability for plants with each flower color.
 - Give the genotypes and phenotypes for the offspring.
 - If Matthew McMatthews planted 100 seeds from this cross, how many should he expect to have of each color?
Purple flowers: _____ Blue flowers: _____ Red flowers: _____

Codominance

Matthew and Martha McMatthews' children, Matthias and Marita, love to go grouper fishing at Grouper Fish Garland! The gatons are known to a special type of striped grouper known as Gopers, and only really great grouper fishermen are lucky enough to catch some on every trip. Many of the grouper fish are blue or yellow, but some end up blue and yellow striped as a result of codominance. Use this information to help you complete each section below.

- Write the correct genotype for each color if B represents a blue trait and Y represents a yellow trait.
Blue: _____ Yellow: _____ Blue and Yellow Striped: _____
- What would happen if Matthias and Marita crossed two "Gopers" or striped grouper fish? Complete the Punnett square to help you determine the probability for each color of grouper fish.
 - Give the possible genotypes and phenotypes for the offspring.
 - What percentage of the offspring would be yellow? _____ %
 - What percentage would be blue? _____ %
 - What percentage would be Gopers (striped)? _____ %
- What would happen if they crossed a yellow grouper fish with a Goper? Complete the Punnett square to help you determine the probability for each color of grouper fish.
 - Give the possible genotypes and phenotypes for the offspring.
 - What percentage of the offspring would be yellow? _____ %
 - What percentage would be blue? _____ %
 - What percentage would be Gopers (striped)? _____ %
- What would happen if they crossed a blue grouper fish with a yellow grouper fish? Complete the Punnett square to help you answer the question.
 - If 100 grouper fish were produced from this cross, how many would you expect for each?
Yellow: _____ Blue: _____ Gopers: _____

9. What would happen if they crossed a blue grouper fish with a Goper? Complete the Punnett square to help you answer the question.

- If 100 grouper fish were produced from this cross, how many would you expect for each?
Yellow: _____ Blue: _____ Gopers: _____

Name: _____ Period: _____ Date: _____

Genetics Practice Problems

1. In pea plants, tall (**T**) is dominant to dwarf (**t**). Show the cross between a heterozygous tall and a dwarf homozygous plant. Use the Punnett square to predict the % Phenotype and Genotype of the offspring.

% Genotype	% Phenotype
Homozygous = _____	Tall = _____
Heterozygous = _____	Dwarf = _____

2. Show the cross between two heterozygous (**Tt**) tall plants. Use the Punnett square to predict the % Phenotype and Genotype of the offspring.

% Genotype	% Phenotype
Homozygous = _____	Tall = _____
Heterozygous = _____	Dwarf = _____

3. In pea plants, green pods are dominant to yellow pods. Show the cross between a homozygous yellow pod plant (**gg**) and a hybrid green pod plant (**Gg**). Use the Punnett square to predict the % Phenotype and Genotype of the offspring.

% Genotype	% Phenotype
Homozygous = _____	Green = _____
Heterozygous = _____	Yellow = _____

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Name _____ 1. Practice setting up keys for the phenotypes listed in each set. Remember that the "medium" trait must always be heterozygous. a) Eggplants can be deep purple, white, or a light violet color. b) Flowers can be white, pink, or red. c) A Hoo can have curly hair, spiked hair, or a mix of both curly and spiked. d) A Sneech can be tall, medium, or short. e) A Bleexo can be spotted, black, or white. 2. Now, can you figure out in the above list, which of the letters represent codominant traits and which are incomplete. Codominant _____ Incompletely Dominant _____ 3. In Smilies, eye shape can be starred, circular, or a circle with a star. Write the genotypes for the pictured phenotypes 4. Show the cross between a star-eyed and a circle eyed. What are the phenotypes of the offspring? _____ What are the genotypes? _____ 5. Show the cross between a circle-star eyed, and a circle eyed. How many of the offspring are circle-eyed? _____ How many are star eyed? _____ Name: _____ Date: _____ In cows, red and white coloration alleles are codominant. 6. Show the cross between two circle-star eyed. How many of the offspring are circle-star eyed? _____ How many are star eyed? _____ Name: _____ Date: _____ 7. A cow that has both alleles will be ROAN (spotted with red & white patches). RR = red WW = white RW = roan 1. A roan cow is crossed with a red cow. What percent of the offspring will be red? _____ 2. A red cow is crossed with a white cow. What percent of the offspring will be roan? _____ 3. A roan cow is crossed with a white cow. What percent of the offspring will be white? _____ 4. Two pink flowers are crossed, how many offspring are: Red? _____ White? _____ Pink? _____ 5. A red flower is crossed with a pink flower, how many offspring are: Red? _____ White? _____ Pink? _____ 6. In your own words, explain the difference between codominance and incomplete dominance. www.biologycorner.com

Check out our incomplete dominance/codominance illustration. Note: We have not created a free handout on this topic, but we offer a resource for purchase on TpT. On TpT, Select topic recap and key: select recap handouts are styled just like our regular free recap handouts, but they tend to cover more detailed/less standard topics. Search: Izuku X Innocent Reader:What Izuku X Innocent Reader Likes: 611. Shares: 306. Reader x Kurapika Kurta - Protected Title: Protected Fandom Hunter x Hunter Character: Kurapika Kurta Genre: angst Warnings: spoilers, blood/minor gore (if you've seen the ep that the spoilers are from then you'll be fine) Intended Gender Audience: Neutral Audience Word Count: 609 words Other ... Subject: Digital Literacy and Computer Science (4), Science (4) Title: Using Code to Create an Animated Animal Description: Students will use the free online coding program, Scratch, to learn the basics of coding and how to use blocks and animations to create an animated animal. Students will show how an animated animal will receive, process, and respond to information ... Discover more types of non-Mendelian inheritance such as incomplete dominance and codominance with the Amoeba Sisters! This video has a handout: ...

