

Incomplete and codominance practice #1

Directions: Read each statement and determine the pattern of inheritance.

1. Birds can be blue, white, or white with blue-tipped feathers.
2. Flowers can be white, pink, or red
3. A hoo can have curly hair, spiked hair, or a mix of both curly and spiked.
4. A sneech can be tall, medium, or short.
5. A Bleexo can be spotted, black or white.

Trolls can have red, blue or purple hair. The allele that controls this trait is INCOMPLETELY DOMINANT, where purple hair is caused by the heterozygous condition.

genotype	phenotype
BB	
	red
BR	

Stanley has purple hair and is married to Julia who brags that she has the bluest blue hair in the valley.

- a. How many of Julia's children will be able to brag about their blue hair also? %
- b. How many will take after their father %
- c. Show a cross to prove your answers.

- d. One of Julia's children is born with shocking red hair. Is Stanley the father of this child?
- e. But wait, Julia swears that she has been faithful, she claims the hospital goofed and got her baby mixed with someone else's. Is Julia the mother of the red-haired child?

Olga has red hair and marries Oliver who has blue hair. They have 36 children. What is the color of these children's hair?

Show a cross to prove it.

Olivia is married to Patrick. Both of them have purple hair. They have 100 children. What is the hair color of their children and in what proportion?

Red % Blue % Purple %

Show a cross to prove it.

In Alpachian Aliens, hair color is a codominant trait. They can either have purple, green or purple and green hair. Fill in the key for hair color.

genotype	phenotype
PP	
	green
PG	Purple and green hair

On planet Alpachia, purple hair is highly valued. Purple haired aliens get special benefits. Oscar has purple and green hair but he wants a wife that will give him children with purple hair.

- a. What color hair should he look for in a wife?
- b. If he can't find this type of alien, what should be his second choice?

Ophelia is not married but she wants to have children. She goes to a fertility clinic where she is fertilized by an anonymous sperm donor. Ophelia has green hair. 5 months later, a litter of aliens are born. There are 8 babies in the litter, 4 have purple and green hair and 4 have green hair.

- a. What color did the babies' father have?
- b. Show a cross to prove it.
