Name: Score:

19 Multiple choice questions

Term 1 of 19

What is the phenotype of a plant with the genotype WR?

- Pink flowers.
- Bluish-gray.
- White flowers.
- Both red flowers and white flowers.

Term 2 of 19

What are the genotypes of the parents in a cross between a homozygous black bird and a homozygous white bird?

- 100% (from the cross of BB x WW).
- 25% (from the Punnett square of WB x WB).
- 50% (from the cross of WR x WW).
- BB (black) and B'B' (white).

Term 3 of 19

What is the probability of a black chicken and a white chicken producing an erminette chick?

- 0% (from the cross of WW x WW).
- 100% (from the cross of BB x WW).
- 50% (from the cross of BB x BB).
- 75% (from the cross of BB x BW).

Term 4 of 19

What is the probability of two erminette chickens producing a white chick?

- 25% (from the Punnett square of BW x BW).
- 50% (from the Punnett square of BB x BB).
- 0% (from the Punnett square of BB x WW).
- 75% (from the Punnett square of WW x BW).

Term 5 of 19

What is the probability of producing white calves from a roan bull and a roan cow?

- 75% (from the Punnett square of WB x BB).
- 25% (from the Punnett square of WB x WB).
- 0% (from the Punnett square of WB x WB').
- 50% (from the Punnett square of BB x BB).

Term 6 of 19

What is the genotype for erminette chickens?

- BW (heterozygous, expressing both black and white feather colors).
- BB or FB (homozygous for the black feather color allele).
- The expected offspring would include white, roan, and brown calves.
- WW or FW (homozygous for the white feather color allele).

Term 7 of 19

What is the probability of producing a pink-flowered plant from a pink-flowered plant crossed with a white-flowered plant?

- 75% (from the cross of WR x WR).
- 25% (from the cross of WW x WR').
- 100% (from the cross of WR x BB).
- 50% (from the cross of WR x WW).

Term 8 of 19

What is incomplete dominance?

- A genetic scenario where the phenotype of the heterozygote is completely different from both homozygous phenotypes.
- A genetic scenario where the phenotype of the heterozygote shows both homozygous phenotypes equally.
- A genetic scenario where the phenotype of the heterozygote matches one of the homozygous phenotypes exactly.
- A genetic scenario where the phenotype of the heterozygote is an intermediate blend of the two homozygous phenotypes.

Term 9 of 19

What is the genotype for white chickens?

- WW or BW (homozygous for the mixed feather color allele).
- BW (heterozygous, expressing both black and white feather colors).
- WW or FW (homozygous for the white feather color allele).
- BB or FB (homozygous for the black feather color allele).

Term 10 of 19

What is codominance?

- A genetic scenario where both alleles in a heterozygote are fully expressed, resulting in offspring with a phenotype that shows both traits distinctly.
- A genetic scenario where both alleles in a heterozygote blend to create a new phenotype.
- A genetic scenario where one allele in a heterozygote is dominant, masking the other trait.
- A genetic scenario where one allele in a heterozygote is suppressed, resulting in offspring with a single trait.

Term 11 of 19

What cross will produce the most pink-flowered plants?

- Crossing two white-flowered plants (WW x WW) will produce the most pink-flowered plants.
- Crossing a pink-flowered plant with a red-flowered plant (WR x RR) will produce the most pink-flowered plants.
- Crossing two pink-flowered plants (WR x WR) will produce the most pink-flowered plants.
- Crossing a red-flowered plant with a white-flowered plant (RR x WW) will produce the most pink-flowered plants.

Term 12 of 19

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

- Purple flowers.
- White flowers.
- Blue flowers.
- Red flowers.

Term 13 of 19

What is the genotype for black chickens?

- WW or FW (homozygous for the white feather color allele).
- BB or FB (homozygous for the black feather color allele).
- BB (black) and B'B' (white).
- BB or WB (homozygous for the mixed feather color allele).

Term 14 of 19

What is the probability of two erminette chickens producing a black chick?

- 75% (from the Punnett square of BW x BB).
- 25% (from the Punnett square of BW x BW).
- 50% (from the Punnett square of BB x WW).
- 0% (from the Punnett square of WW x WW).

Term 15 of 19

What is the phenotype of the offspring from a cross between a homozygous black bird and a homozygous white bird?

- Bluish-gray.
- White Flowers.
- Red Flowers.
- Pink Flowers.

Term 16 of 19

What results from crossing a black individual with a bluish-gray individual?

- The offspring will be a mix of black (BB) and white (WW).
- The offspring could be either black (BB) or bluish-gray (BB').
- The offspring will all be bluish-gray (BB').
- The offspring will all be black (BB).

Term 17 of 19

What is the phenotype of a plant with the genotype RR?

- Red flowers.
- Pink flowers.
- White flowers.
- Blue flowers.

Term 18 of 19

What is the probability of producing roan calves from a roan bull and a roan cow?

- 0% (from the Punnett square of BB x BB).
- 75% (from the Punnett square of WB x WB').
- 25% (from the Punnett square of WB x BB).
- 50% (from the Punnett square of WB x WB).

Term 19 of 19

What is the expected offspring from mating a roan bull and a roan cow?

- The expected offspring would include white and brown calves.
- The expected offspring would include only brown calves.
- The expected offspring would include only white calves.
- The expected offspring would include white, roan, and brown calves.