



Name \_\_\_\_\_ Class \_\_\_\_\_ Date \_\_\_\_\_

1 In a certain variety of chicken, the genes for black feather color and the genes for white feather color are **codominant**. This variety of chicken will most likely have

- A three possible phenotypes for feather color
- B white feather color, only
- C only two genotypes for feather color
- D black feather color, only



3 A **mutation** may be passed on to future generations if it occurs within **specialized cells** of the

- A stomach
- B liver
- C pancreas
- D

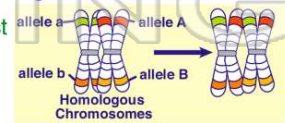


2 In fruit flies, **red eye color (R)** is dominant and **white eye color (r)** is recessive. The allele for eye color is carried on the X-chromosome. Which cross would most likely produce **50% white-eyed males** and **50% red-eyed males**?

- A  $X^R X^R \times X^R Y$
- B  $X^R X^R \times X^r Y$
- C  $X^R X^r \times X^r Y$
- D  $X^r X^r \times X^R Y$

4 The results of a **genetic process** are represented in this diagram.

Which process most likely produced these results?



- A chromosomal mutation during mitosis
- B nondisjunction during meiosis

5



## PREVIEW

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7

- A 0%
- B 25%
- C 50%
- D 75%



- A Down syndrome
- B hemophilia
- C color blindness
- D phenylketonuria

9

The **genes located** at corresponding positions on **homologous chromosomes** are known as

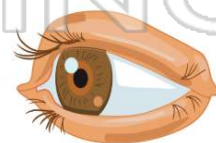
- A autosomes
- B homozygotes
- C alleles
- D heterozygotes



10

An individual possesses **two identical genes** for a certain trait. For this trait, the individual is said to be

- A dominant
- B hybrid
- C homozygous
- D heterozygous





## ANSWER KEY

In a certain variety of chicken, the genes for black feather color and the genes for white feather color are **codominant**. This variety of chicken will most likely have

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(a)

In fruit flies, **red eye color (R)** is dominant and **white eye color (r)** is recessive. The allele for eye color is carried on the X-chromosome. Which cross would most likely produce **50% white-eyed males** and **50% red-eyed males**?

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- B  $X^R X^R \times X^r Y$
- C  $X^R X^r \times X^r Y$
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(c)

A **mutation** may be passed on to future generations if it occurs within **specialized cells** of the

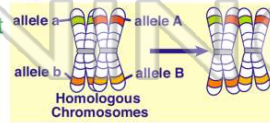
- A stomach
- B liver
- C pancreas
- D ovary



(d)

The results of a **genetic process** are represented in this diagram.

Which process most likely produced these results?



- A chromosomal mutation during mitosis
- B nondisjunction during meiosis
- C independent assortment during mitosis

(d)



## PREVIEW

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- D 75%



- B hemophilia
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The **genes located** at corresponding positions on **homologous chromosomes** are known as

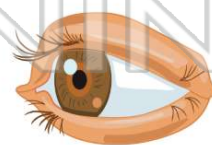
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(c)

An individual possesses **two identical genes for a certain trait**. For this trait, the individual is said to be

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(c)