SASKATCHEWAN BIOLOGY 30 · UNIT C · 25 QUESTIONS

Genetics - Inheritance and Molecular Genetics — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **A section of DNA that codes for a product is called**

- A gene
- B genotype
- C phenotype
- D dominant allele

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2 **In a cross of two heterozygotes for a recessive trait, the expected ratio of offspring showing the trait is**

- A 1 in 2
- B 1 in 4
- C 3 in 4
- D 4 in 4

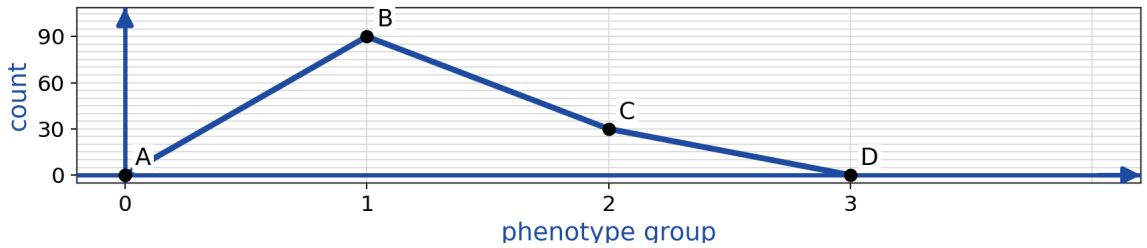
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3 **For a genetic cross, 1 out of every 4 offspring are expected to show a recessive trait. The percent expected to show it is ____**

ANSWER _____

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4 **The graph shows offspring counts by phenotype. The count for phenotype A is _____**



ANSWER

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5 **One form of a gene is called**

A phenotype

B dominant allele

C allele

D recessive allele

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6 **DNA base pairing pairs adenine with**

A guanine

B cytosine

C uracil

D thymine

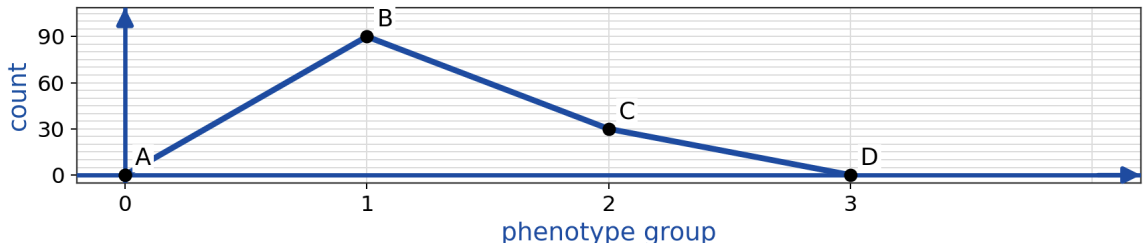
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7 **For a genetic cross, 3 out of every 4 offspring are expected to show a recessive trait. The percent expected to show it is ____**

ANSWER _____

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8 **The graph shows a 3 to 1 phenotype ratio. The ratio is most consistent with**



- **A** a monohybrid cross of heterozygotes
- **B** a test cross only
- **C** codominance only
- **D** a dihybrid cross

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9 **The alleles an organism has for a trait is called**

- **A** dominant allele
- **B** genotype
- **C** recessive allele
- **D** homozygous

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10 **In DNA, guanine pairs with**

A adenine

B thymine

C cytosine

D uracil

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11 **For a genetic cross, 1 out of every 2 offspring are expected to show a recessive trait. The percent expected to show it is ____**

ANSWER _____

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12 **The observable traits of an organism is called**

- A recessive allele
- B homozygous
- C heterozygous
- D phenotype

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13 **Transcription produces**

- A RNA from DNA
- B DNA from RNA
- C protein from lipid
- D ATP from glucose

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14 **A pea plant with genotype Aa is crossed with a pea plant with genotype aa. The expected percent of offspring with genotype Aa is**

ANSWER _____

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15 **An allele that shows its trait when present is called**

A homozygous

B dominant allele

C heterozygous

D DNA

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16 **Translation happens at the**

A nucleus only

B Golgi apparatus

C ribosome

D lysosome

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17 **In humans, a son receives his Y chromosome from his**

A mother

B father

C maternal grandmother

D either parent equally

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18 **An allele that shows its trait only when two copies are present is called**

A heterozygous

B DNA

C mutation

D recessive allele

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19 **A genotype of Aa is**

A heterozygous

B homozygous dominant

C homozygous recessive

D a phenotype

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20 **A red flower and a white flower cross and all offspring have pink flowers. This pattern is called**

- A complete dominance
- B codominance
- C incomplete dominance
- D sex linkage

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21 **Having two identical alleles for a gene is called**

- A DNA
- B homozygous
- C mutation
- D gene

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22 **A pedigree shows a trait appearing in every generation and affecting sons and daughters equally. The trait is most likely**

A dominant

B recessive and sex linked

C caused by the environment only

D a mutation that cannot be passed on

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23 **Having two different alleles for a gene is called**

A mutation

B gene

C heterozygous

D allele

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24 **During meiosis, the number of chromosomes in a gamete compared with a body cell is**

A the same

B doubled

C halved

D zero

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25 **The molecule that stores genetic information is called**

A gene

B allele

C genotype

D DNA

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ANSWER KEY

1. A
2. B
3. 25
4. 90
5. C
6. D
7. 75
8. A
9. B
10. C
11. 50
12. D
13. A
14. 50
15. B
16. C
17. B
18. D
19. A
20. C
21. B
22. A
23. C
24. C
25. D

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