ALBERTA BIOLOGY 30 · UNIT C · 5 QUESTIONS

Cell Division, Genetics & Molecular Biology — 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 **Young green pea plants growing in rows in a garden bed. In pea plants, a tall plant with genotype Tt is crossed with another tall plant with genotype Tt. The genotypic ratio of the offspring is**



A 1:1

B 1:2:1

C 3:1

D 1:1:1:1

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2 **During meiosis, homologous chromosome pairs separate and move toward opposite poles of the cell during**

A prophase I

B metaphase II

C anaphase I

D anaphase II

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3 **During DNA replication, short segments of new DNA called Okazaki fragments are produced on the lagging strand. The enzyme that joins these fragments together is**

A helicase

B DNA polymerase

C RNA polymerase

D DNA ligase

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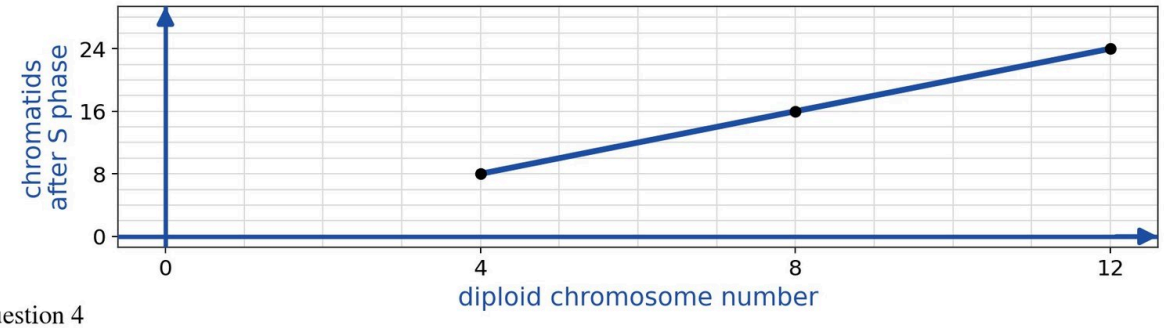
4

The graph shows chromatids in a cell after the S phase of interphase for species with different diploid numbers. A frog has a diploid chromosome number of 8. The number of chromatids in a frog cell after the S phase, before mitosis, is ____. Record your answer as a number.



Question 4

The graph shows chromatids in a cell after the S phase of interphase for species with different diploid numbers. A frog has a diploid chromosome number of 8. The number of chromatids in a frog cell after the S phase, before mitosis, is ____. Record your answer as a number.

ANSWER

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5 **A man who has an X-linked dominant disorder (XD Y) has children with an unaffected woman. The children who will inherit the disorder allele from their father are**

A all of his sons

B all of his daughters

C half of his daughters

D none of his children

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ANSWER KEY

1. B
2. C
3. D
4. 16
5. B

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