

Module 08 Quiz: Meiosis

Name: _____ Date: _____

Part A: Multiple Choice (7 points)

Choose the best answer for each question. (1 point each)

1. The purpose of meiosis is to produce:
2. A) Body cells for growth
3. B) Gametes for reproduction
4. C) Identical cells for repair
5. D) Stem cells
6. During meiosis, a cell with 46 chromosomes produces gametes with:
7. A) 46 chromosomes
8. B) 92 chromosomes
9. C) 23 chromosomes
10. D) 12 chromosomes
11. Crossing over occurs during:
12. A) Prophase I
13. B) Metaphase I
14. C) Anaphase II
15. D) Prophase II
16. Independent assortment refers to:
17. A) The random distribution of homologous chromosomes
18. B) The separation of sister chromatids

- 19. C) DNA replication
- 20. D) Crossing over
- 21. Meiosis results in:
- 22. A) 2 diploid cells
- 23. B) 2 haploid cells
- 24. C) 4 diploid cells
- 25. D) 4 haploid cells
- 26. Nondisjunction can result in:
- 27. A) Identical twins
- 28. B) Offspring with abnormal chromosome numbers
- 29. C) Increased crossing over
- 30. D) Faster cell division
- 31. Homologous chromosomes separate during:
- 32. A) Mitosis
- 33. B) Meiosis I
- 34. C) Meiosis II
- 35. D) Cytokinesis

Part B: Free Response (3 points)

Answer each question in complete sentences.

1. (1 point) Compare and contrast mitosis and meiosis in terms of their purpose and the number/type of cells produced.

1. (1 point) Explain how crossing over and independent assortment contribute to genetic variation.

1. (1 point) What is nondisjunction? Describe one condition that can result from it.
