

Chapter 13 Meiosis and Sexual Life Cycles: Practice Test

Multiple Choice

Identify the letter of the choice that best completes the statement or answers the question.

Self-Quiz Questions

- _____ 1. A human cell containing 22 autosomes and a Y chromosome is
 - a. a somatic cell of a male.
 - b. a zygote.
 - c. a somatic cell of a female.
 - d. a sperm cell.
 - e. an ovum.
- _____ 2. Homologous chromosomes move to opposite poles of a dividing cell during
 - a. mitosis.
 - b. meiosis I.
 - c. meiosis II.
 - d. fertilization.
 - e. binary fission.
- _____ 3. Meiosis II is similar to mitosis in that
 - a. homologous chromosomes synapse.
 - b. DNA replicates before the division.
 - c. the daughter cells are diploid.
 - d. sister chromatids separate during anaphase.
 - e. the chromosome number is reduced.
- _____ 4. If the DNA content of a diploid cell in the G_1 phase of the cell cycle is x , then the DNA content of the same cell at metaphase of meiosis I would be
 - a. $0.25x$
 - b. $0.5x$
 - c. x .
 - d. $2x$.
 - e. $4x$.
- _____ 5. If we continued to follow the cell lineage from question 4, then the DNA content at metaphase of meiosis II would be
 - a. $0.25x$.
 - b. $0.5x$.
 - c. x .
 - d. $2x$.
 - e. $4x$.
- _____ 6. How many different combinations of maternal and paternal chromosomes can be packaged in gametes made by an organism with a diploid number of 8 ($2n = 8$)?
 - a. 2
 - b. 4
 - c. 8
 - d. 16
 - e. 32
- _____ 7. The immediate product of meiosis in a plant is a
 - a. spore.