

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 somatic cell of a male.
 - a zygote.
 - a somatic cell of a female.
 - a sperm cell.
 - an ovum.
- _____ 2. Homologous chromosomes move to opposite poles of a dividing cell during
- mitosis.
 - meiosis I.
 - meiosis II.
 - fertilization.
 - binary fission.
- _____ 3. Meiosis II is similar to mitosis in that
- homologous chromosomes synapse.
 - DNA replicates before the division.
 - the daughter cells are diploid.
 - sister chromatids separate during anaphase.
 - 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
- $0.25x$
 - $0.5x$
 - x .
 - $2x$.
 - $4x$.
- _____ 5. If we continued to follow the cell lineage from question 4, then the DNA content at metaphase of meiosis II would be
- $0.25x$.
 - $0.5x$.
 - x .
 - $2x$.
 - $4x$.
- _____ 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 ($2n = 8$)?
- 2
 - 4
 - 8
 - 16
 - 32
- _____ 7. The immediate product of meiosis in a plant is a
- spore.