

Name _____

Meiosis I vs. Meiosis II: The Great Chromosomal Divide

Multiple Choice Questions

1. What is the main difference between meiosis I and meiosis II?
 - a) Meiosis I has one division, while meiosis II has two divisions.
 - b) Meiosis I produces four gametes, while meiosis II produces two.
 - c) Meiosis I involves sister chromatids, while meiosis II involves homologous chromosomes.
 - d) Meiosis I and meiosis II are identical processes.

2. During which stage of meiosis I do homologous chromosomes come together and exchange genetic material?
 - a) Prophase I
 - b) Metaphase I
 - c) Anaphase I
 - d) Telophase I

3. How many haploid cells are produced at the end of meiosis I in humans?
 - a) One
 - b) Two
 - c) Four
 - d) Eight

4. What is the purpose of crossover events in meiosis I?
 - a) To create identical offspring
 - b) To separate sister chromatids
 - c) To maintain the diploid state
 - d) To introduce genetic diversity

5. What occurs during anaphase II of meiosis II?
 - a) Sister chromatids are separated and move to opposite ends of the cell.
 - b) Homologous chromosomes are separated and move to opposite ends of the cell.
 - c) The nuclear envelope breaks down.
 - d) Chromosomes align at the cell's equator.

