

Meiosis Quiz

Short answer: Answer the following questions using complete sentences. (2 points each)

1. What is the difference between meiosis and mitosis?
2. What role does meiosis play in sexual reproduction?
3. How are the cells at the end of meiosis different from the cells at the beginning of meiosis? Be sure to use key words like haploid, diploid, and chromosomes in your answer.
4. Describe crossing over and how it occurs.
5. What is nondisjunction and why does it happen?

Matching: In the space provided, write the letter of the description that best matches the term or phrase for the phases of Meiosis. Answers can be used more than once. (1 point each)

a. Prophase

b. Metaphase

c. Anaphase

d. Telophase

6. _____ The spindle is broken down, the chromosomes uncoil, and the cytoplasm divides to yield new cells.
7. _____ The phase in which crossing over can occur.
8. _____ Chromosomes coil and a spindle forms.
9. _____ The spindle fibers pull the tetrads into the middle, or equator, of the spindle.
10. _____ At the end of this phase each cell has half the genetic information of the original cell.
11. _____ As the chromosomes coil, homologous chromosomes line up with each other gene by gene along their length, to form a four-part structure called a tetrad.
12. _____ Homologous chromosomes separate and move to opposite ends of the cell.
13. _____ In this phase events occur in the reverse order as prophase.
14. _____ This critical step ensures that each new cell will receive only one chromosome from each homologous pair.
15. _____ The centromere of each chromosome becomes attached to a spindle fiber.