

AP Biology – Meiosis Worksheet

Identifying Processes *On the lines provided, order the different stages of meiosis I THROUGH meiosis II, including interphase in the proper sequence.*

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| 1. _____ | homologous chromosome line up in the center of the cell |
| 2. _____ | spindle fibers pull homologous pairs to ends of the cell |
| 3. _____ | 4 haploid (N) daughter cells form |
| 4. _____ | cells undergo a round of DNA replication |
| 5. _____ | sister chromatids separate from each other |
| 6. _____ | 2 haploid (N) daughter cells form |
| 7. _____ | spindle fibers attach to the homologous chromosome pairs |
| 8. _____ | individual chromatids move to each end of the cell |
| 9. _____ | crossing-over (if any) occurs |

Short Answer *On the lines provided, answer the following questions.*

11. Compare the number and type of cells that result from meiosis vs mitosis.

12. How do the genetic contents of cells resulting from mitosis and meiosis differ?

Reviewing Key Skills

13. **Comparing and Contrasting** Describe a similarity and a difference between meiosis I and meiosis II.

14. **Applying Concepts** If a diploid cell containing 28 chromosomes undergoes meiosis, how many chromosomes will each daughter cell have?

15. **Compare and Contrast:** How are mitosis and meiosis similar and different?

Read each statement, then on the line write down the phase of mitosis or meiosis that the action occurs. IF the action occurs in both, write both. The first one is done for you

1. _____ **metaphase I meiosis** homologous chromosome line up in the center of the cell
2. _____ The individual chromosomes move apart.
3. _____ spindle fibers pull homologous pairs to ends of the cell
4. _____ 4 haploid (N) daughter cells form
5. _____ cells undergo a round of DNA replication
6. _____ The chromosomes line up across the middle of the cell.
7. _____ Chromosomes become visible.
8. _____ sister chromatids separate from each other
9. _____ 2 haploid (N) daughter cells form
10. _____ Sister chromatids separate into individual chromosomes.
11. _____ Nuclear envelope re-forms.
12. _____ spindle fibers attach to the homologous chromosome pairs
13. _____ individual chromatids move to each end of the cell
14. _____ The nucleolus disappears and the nuclear envelope breaks down.
15. _____ Each chromosome is connected to a spindle fiber.
16. _____ crossing-over (if any) occurs