

## Meiosis Worksheet

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

1. metaphase I 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

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

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

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

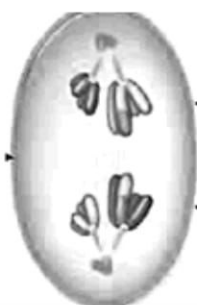
13 **Applying Concepts** If a diploid cell containing 28 chromosomes undergoes meiosis, how many chromosomes will each daughter cell have?

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

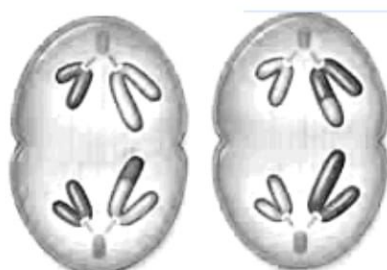
Read each statement, and then on the line write down the phase of mitosis or meiosis that the action occurs. IF the action occurs in both, write both. The first one is done for you

- |                       |                      |  |
|-----------------------|----------------------|--|
| 1. <b>metaphase I</b> | <b>meiosis</b> _____ | 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                                  |

IDENTIFY THE PHASES OF MEIOSIS:



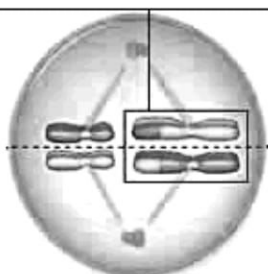
1.



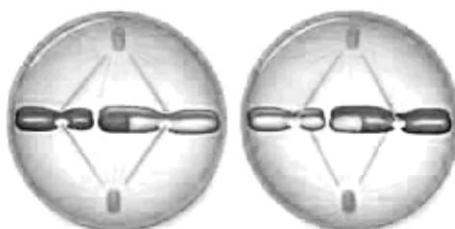
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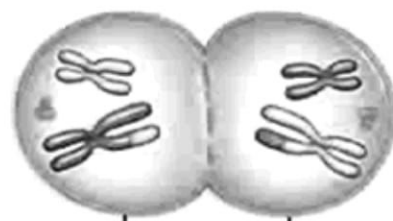
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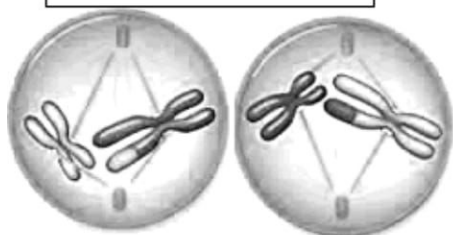
4.



5.



6.



7.



8.