

Meiosis Worksheet

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

10. Compare the number and type of cells that result from meiosis vs mitosis. Mitosis 2 diploid cells, that are somatic cell (cells that are not gametes) and identical to each other and to the parent cell _____

11. How do the genetic contents of cells resulting from mitosis and meiosis differ?
Mitosis are identical, while meiosis is not identical.
12. If a diploid cell containing 20 chromosomes undergoes mitosis, how many chromosomes will each daughter cell have?
20

Place each statement from the list on the left with the stage of mitosis or meiosis that the action occurs. If the action occurs in both, write both. The list on the left is for you.

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| 1. _____ | homologous chromosomes 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 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. _____ | two daughter cells form from each other |
| 9. _____ | 4 haploid daughter cells form |
| 10. _____ | two daughter cells separate the individual chromosomes |
| 11. _____ | forming spindle fibers |
| 12. _____ | spindle fibers attach to the homologous chromosome pairs |
| 13. _____ | individual chromosomes move to each end of the cell |
| 14. _____ | the nuclear envelope and the nuclear envelope break down |
| 15. _____ | two chromosomes is combined to a single one |