

Page 6 – 8 Multiple choices Answer:

1a 2b 3e 4d 5b 6d 7b 8a 9d 10c 11b 12c 13c 14c 15a 16b 17b 18b 19a 20a

Page 1 Answer: (only for some of questions)

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 pairs of chromosomes line up in the center of the cell |
| 2. 5 th anaphase I _ | spindle fibers pull homologous pairs to opposite 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 cells (cells that are not gametes) and identical to each other and to the parent cell
Meiosis makes 4 haploid cells that are gametes and are all different from each other and from 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

Page 2 Answer:

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

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|---|--|
| 1. _____metaphase I meiosis | homologous chromosome line up in the center of the cell |
| 2. anaphase II meiosis ; anaphase mitosis _____ | The duplicated chromosomes are split apart. |
| 3. anaphase I meiosis _____ | spindle fibers separate homologous pairs |
| 4. Telophase II meiosis _____ | 4 haploid (N) daughter cells form |
| 5. interphase meiosis and mitosis _____ | cells undergo a round of DNA replication |
| 6. metaphase mitosis/ metaphase II meiosis (no pairs) | Individual chromosomes line up across the middle of the cell. |
| 7. prophase I, Prophase II meiosis; prophase mitosis | Chromosomes become visible. |
| 8. anaphase mitosis; anaphase II meiosis _____ | sister chromatids separate from each other |
| 9. _____ Telophase I meiosis | 2 haploid (N) daughter cells form |
| 10. _____ anaphase II meiosis; anaphase mitosis | Sister chromatids separate into individual chromosomes. |
| 11. _ Telophase I and II meiosis; Telophase mitosis | Nuclear envelope re-forms. |
| 12. _____ prophase I meiosis | spindle fibers attach to the homologous chromosome pairs |
| 13. _____ anaphase II meiosis; anaphase mitosis | individual chromatids move to each end of the cell |
| 14. ___ prophase I and II meiosis, prophase mitosis | The nucleolus disappears |
| 15. _____ prophase II meiosis; prophase mitosis | Each chromosome is connected to a spindle fiber. On both sides of the centromere |
| 16. _____ prophase I meiosis | crossing-over (if any) occurs |