

Name key

Date _____

MEIOSIS AND MITOSIS

Write answer next to the question!

1. Describe the purpose of mitosis
duplication division of the nucleus in somatic cells.
2. How many times does the cell divide during mitosis?
1
3. What kind of cells are produced at the end of mitosis?
diploid identical daughter
4. What are sister chromatids?
exact copy of the chromosome—S phase during interphase
5. Briefly describe what happens during prophase I
nuclear membrane disappears, chromosomes condense, & spindles form (microtubules)
6. Briefly describe what happens during metaphase I
chromosomes line up in the center
7. Briefly describe what happens during anaphase I
centromeres & sister chromatids move to opposite poles
8. Briefly describe what happens during telophase I
chromosomes uncoil, nuclear envelope reforms, & spindle disappears
9. Is cytokinesis part of mitosis?
no
10. Briefly describe what happens during cytokinesis
division of the cytoplasm—forming 2 diploid daughter cells
11. Describe the purpose of meiosis!
reduction division of germ cells (haploid)
12. How many times does the cell divide during Meiosis?
2
13. What kind of cells are produced at the end of meiosis?
haploid gametes
14. Briefly describe the difference of prophase I & II.
Crossing over occurs only during prophase I
Homologous chromosomes pair up (synapsis)—in prophase I only
15. Briefly describe the difference of anaphase I & II.
A I —homologous chromosomes separate
A II—sister chromatids separate