

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

**Biology Mid-Year Review: Mitosis and Meiosis**

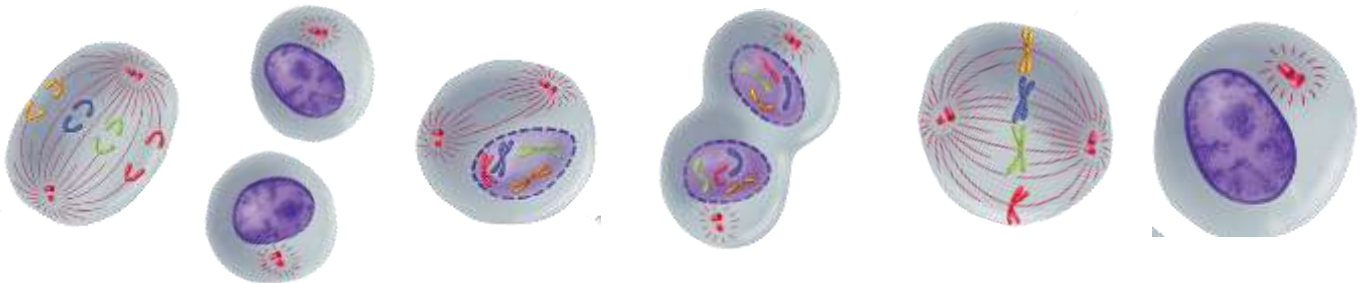
**The Cell Cycle**

1. What are the 3 stages of the cell cycle? \_\_\_\_\_

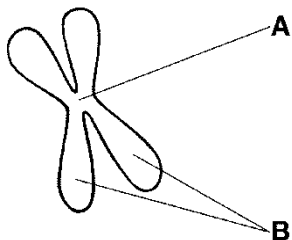
2. What are the 3 phases of interphase and what occurs during each step?

3. What are the 4 phases of mitosis and what occurs during each phase?

4. Look at the following pictures of cell in different steps of the cell cycle. Identify the phase each cell is in.



5. Label the parts of a chromosome:



6. Label the **centriole** and **spindle** below:



### Meiosis

1. The purpose of meiosis is to make \_\_\_\_\_.
2. What does it mean to be haploid?
3. What type of cells are haploid? \_\_\_\_\_
4. What does it mean to be diploid?
5. What type of cells are diploid? \_\_\_\_\_
6. What type of cells does meiosis create? \_\_\_\_\_
7. Are these cells that meiosis creates haploid or diploid? \_\_\_\_\_
8. How many cells are created during meiosis? \_\_\_\_\_
9. How many times does one cell divide during meiosis? \_\_\_\_\_
10. What is fertilization?
11. Why do our cells go through meiosis?

12. What are gametes? \_\_\_\_\_
13. What is a zygote? \_\_\_\_\_
14. Put the developmental order of a child in correct order:  
WORD BANK: fetus, zygote, baby, embryo  
\_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_ → \_\_\_\_\_
15. When a haploid male gamete joins a haploid female gamete, the new cell is \_\_\_\_\_  
(choose one: haploid or diploid)
16. A human diploid body cell has how many chromosomes? \_\_\_\_\_
17. A human haploid gamete has how many chromosomes? \_\_\_\_\_
18. What are all the differences between mitosis and meiosis?
19. What's the difference between sexual and asexual reproduction?
20. Mitosis makes \_\_\_\_\_ cells, like hair cells and skin cells. Meiosis makes \_\_\_\_\_  
cells, like egg cells and sperm cells.
21. If a body cell (like a skin cell) of a rabbit has 50 chromosomes, how many chromosomes does the egg cell  
have?
22. When a sperm cell and egg cell meet what do they form (before a baby, before a fetus, before an embryo):
23. Mitosis makes cells with \_\_\_\_\_ the number of chromosomes. Meiosis makes cells with  
\_\_\_\_\_ the number of chromosomes
24. Mitosis or Meiosis?
- When you get a cut, your cells go through this so that you can heal: \_\_\_\_\_
  - The new daughter cells contain half the number of chromosomes: \_\_\_\_\_
  - Makes cells that are genetically different. One cell may contain the gene for blue eye color, while the  
other cell may contain the gene for brown eye color: \_\_\_\_\_

- b. When you grow taller, your cells go through this: \_\_\_\_\_
- c. When you break a nail, your cells have to go through this so that your nail grows: \_\_\_\_\_
- d. Makes 4 cells: \_\_\_\_\_
- e. Creates diploid cells: \_\_\_\_\_
- f. A cell starts with 66 chromosomes. At the end of this process, the new daughter cells also have 66 chromosomes: \_\_\_\_\_
- g. Makes gametes: \_\_\_\_\_
- h. Cancer cells go through this: \_\_\_\_\_