NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Mitosis and Meiosis Review Guide

1. When does DNA replication occur? Interphase

2. Describe mitosis? When a parent cell produces 2 diploid daughter cells

3. Diploid refers to? The amount of chromosomes

4. The two halves of a replicated chromosome are referred to as – Sister Chromatids

5. The T-shaped organelle responsible for pulling a chromosome apart - Centrioles

**Column A**

\_b\_6. The final phase of mitosis, in which two daughter cells are formed,

each containing a complete set of chromosomes.

# Column B

1. anaphase
2. telophase
3. interphase
4. metaphase
5. prophase

\_e\_7. Chromosomes become visible, nucleolus and nuclear

envelope disappear, and a spindle forms between the

pairs of centrioles.

\_c\_8. The nucleus and nucleolus can be seen clearly. Chromosomes

are not visible because they are in the form of uncoiled

chromatin.

\_a\_9. The centromere splits and the sister chromatids are pulled apart

to opposite poles of the cell.

\_d\_10. Chromosomes move to the middle with each chromatid attached

to a spindle fiber by its centromere.

Matching II

1. The full set of chromosomes

b. A cell that divides to make 2 daughter cells

1. Coiled, replicated DNA that forms 2 strands joined as an X shape.

d. Exactly alike

e. Cells that are offspring of parent cells

\_b\_11. parent cell

\_e\_12. daughter cell

\_c\_13. chromosome

\_d\_14. homologous

\_a\_15. diploid

*Matching III*

1. A long fiber that connects to the centromere of a chromosome and pulls it apart
2. Uncoiled, threadlike strings of DNA
3. Pinching in cell membrane in telophase
4. DNA makes a copy of itself
5. The center point at which 2 chromatids are attached

\_e\_16. centromere

\_a\_17. spindle

\_b\_18. chromatin material

\_d\_19. DNA replication

\_c\_20. cleavage furrow

For questions 21-24, decide whether the phrase relates to **(A)** Mitosis or **(B)** Meiosis. Write the correct letter in the blank.

\_B\_21. end product is 4 daughter cells

\_B\_22. creates sex cells

\_A\_23. occurs in the somatic (body) cells

\_A\_24. end product is diploid cells

25. How many sperm cells are produced by a cell going through meiosis? \_4\_

26. At the end of meiosis, how many viable (good) egg cells are produced? \_1\_

27. In what phase does DNA replication occur? \_\_Interphase\_\_\_

##### Fill in the blanks – can be used more than once!

Interphase Oogenesis 46 Cell plate Zygote 23 Spermatogenesis

Cytokinesis Cleavage Furrow Primary Oocyte Anaphase

28. Meiosis in males is called a \_Spermatogenesis\_\_.

29. Meiosis in females is called \_\_\_\_Oogenesis\_\_\_\_\_.

30. A \_Cell Plate\_\_ forms during telophase of mitosis in plants.

31. \_\_Interphase\_\_ is the phase of mitosis that cells spend the majority of their time.

32. There are \_46\_\_ chromosomes the somatic cells of a normal, healthy human.

33. There are \_46\_\_ chromosomes in a fertilized egg cell of a human.