

CHAPTER 9: Cell Division—Proliferation and Reproduction

I. Match the term to the description (write the letter) (10x4 =40)

A. Interphase B. Prophase C. Metaphase D. Anaphase E. Telophase

- ___E___ 1. Spindles disappear.
- ___E___ 2. New nuclear membrane forms around the daughter nuclei.
- ___B___ 3. The chromosomes become visible.
- ___C___ 4. The chromosomes are located at the equator of the cell.
- ___E___ 5. The cleavage furrow forms.
- ___D___ 6. The chromatids move towards the poles of the cell.
- ___A___ 7. DNA is replicated.
- ___E___ 8. The cell plate is completed.
- ___A___ 9. The organization phase. Cell prepares for next division.
- ___D___ 10. Daughter chromosomes are at the pole.

II. Answer the following questions.

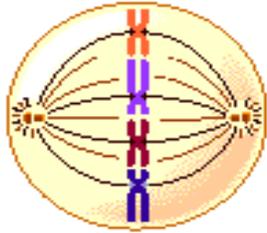
11. Cells that have only one of each homologous pair are said to be haploid, a condition that is represented by n . Cells that have two of each homologous pair are said to be diploid or $2n$. For each of the following, is the cell haploid or diploid? Indicate by writing **n or $2n$ (10 pts)**

liver cell $2n$ _____ gamete n _____ egg cell n _____
 zygote $2n$ _____ skin cell $2n$ _____ sperm n _____
 stomach cell $2n$ _____ sex cell n _____ brain cell $2n$ _____
 lung cell $2n$ _____

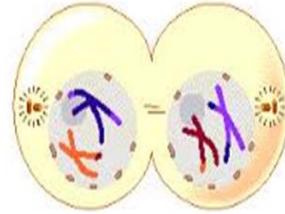
12. The muscle cells of a dog have 78 chromosomes. Fill in the correct chromosome number in the following cells. (10 pts)

a bone cell 156 sperm 39 haploid cell 39
 diploid cell 156 zygote 156

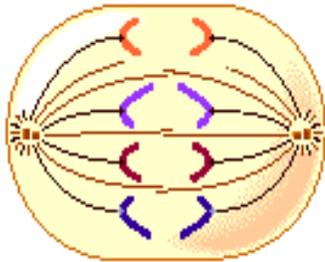
III. Identify the stage of mitosis in the following cells. (4X5=20)
Word choices: *Prophase, Metaphase, Anaphase, Telophase*



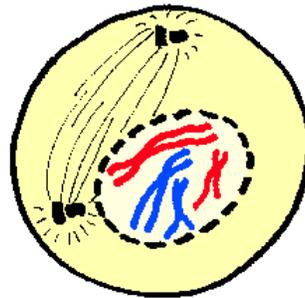
13. Metaphase_____



14. Telophase_____



15. Anaphase _____



16. Prophase _____