

# CHROMOSOME/MITOSIS/MEIOSIS REVIEW

Answer the following questions.

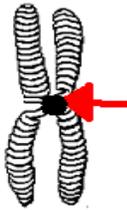
1. Name the stage of interphase in which cells copy their DNA. \_\_\_\_\_

2. Name this phase. \_\_\_\_\_

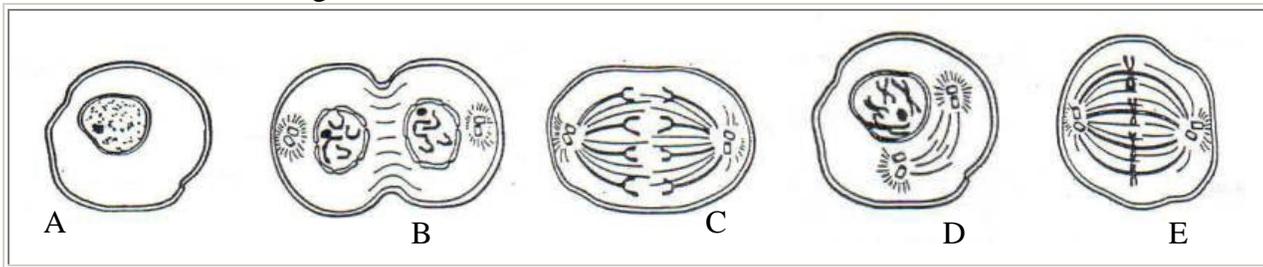


3. Name the phase in which spindle fibers and centrioles disappear. \_\_\_\_\_

4. Name this spot that holds the chromatid arms together. \_\_\_\_\_



5. Put the following cells in the correct order.



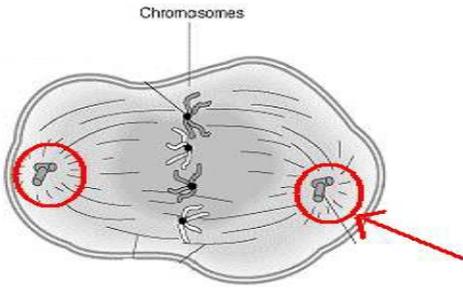
6. DNA that is spread out in the nucleus of a non-dividing cell is called \_\_\_\_\_.

7. Name the phase this cell is in. \_\_\_\_\_

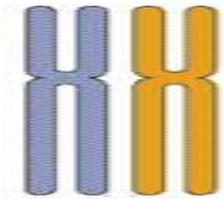


8. Name the phase of the cell cycle in which cells spend most of their time doing their job. \_\_\_\_\_

9. Name these structures where the spindle fibers grow from.



10. Phase of the cell cycle in which the cell makes organelles needed for the new cell. \_\_\_\_\_



11. Chromosomes that are the same size, same shape, and carry genes for the same traits are called \_\_\_\_\_ chromosomes.

12. True or False - These two chromosomes are identical.

13. Name the phase of mitosis that follows anaphase. \_\_\_\_\_

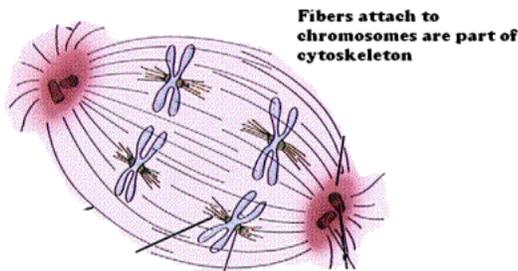
14. Name this phase in which a nucleus is visible and the DNA is spread out as chromatin.



15. Name the phase of mitosis in which chromatids separate and move to opposite ends of the cell.

16. TRUE or FALSE – Chromatids of a chromosome are identical.

17. These microtubule fibers that pull the chromosomes are called the \_\_\_\_\_.



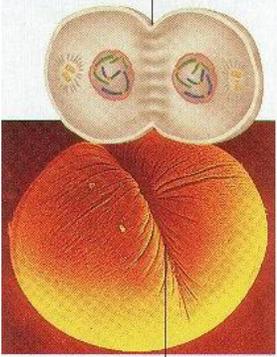
18. Phase of the cell cycle in which cells stop dividing.  
\_\_\_\_\_

19. Phase of the cell cycle that follows  $G_1$   
\_\_\_\_\_

20. Phase in which the nuclear membrane and nucleolus disappear and spindle fibers and centrioles appear.

\_\_\_\_\_

21. Tell the phase these cells are in. \_\_\_\_\_

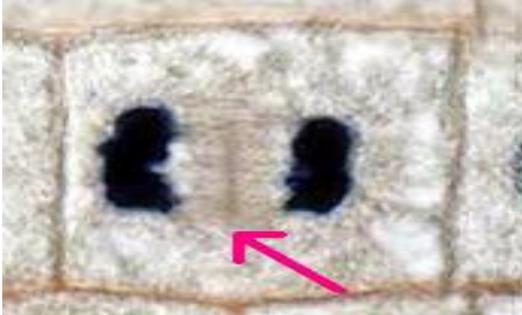


22. Phase of the cell cycle in which the nuclear membrane and nucleolus return. \_\_\_\_\_

23. Name the 3 phases (in order) that make up interphase. \_\_\_\_\_

24. Phase in which the cytoplasm splits. \_\_\_\_\_

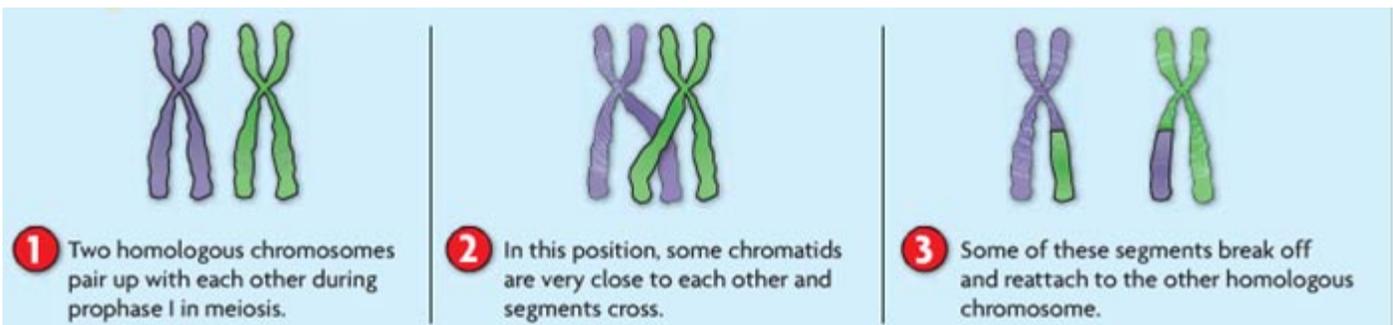
25. Phase in which chromosomes spread out (unwind) into chromatin. \_\_\_\_\_



26. What phase is this cell in? \_\_\_\_\_

27. What is this dividing wall called? \_\_\_\_\_

28. If a cell has a total of 34 chromosomes, how many chromatids does it have? \_\_\_\_\_?



29. Which process is happening in the picture above? \_\_\_\_\_

30. During which stage of meiosis does this happen? \_\_\_\_\_

31. What event pulled the two chromosomes next to each other? \_\_\_\_\_

32. Add the following terms and phrases to the Venn diagram on the next sheet comparing mitosis and meiosis. (It is alright if you simply add the # into the diagram.)

1. Produces haploid cells

2. Occurs in germ cells  
(produces sex cells)

3. Occurs in plant and  
animal cells

4. In humans, produces  
cells with 23  
chromosomes

5. Involves cellular  
division

6. DNA is copied once

7. Occurs in body  
(somatic) cells

8. Produces 4 cells

9. Produces cells that are  
identical to each other

10. Homologous  
chromosomes line up  
paired with each other

11. Cell divides only  
once

12. Produces diploid  
cells

13. Produces 2 cells

14. Has 2 separate  
divisions

15. New cells are  
different from each  
other

16. In humans, produces  
cells with 46  
chromosomes

17. Homologous  
chromosomes do not  
line up next to each  
other

Mitosis

Both

Meiosis

