

1. Is the following sentence true or false? Chromosomes are visible in most cells except during cell division.

2. At the beginning of cell division, what does each chromosome consist of?

3. _____ is the area where each pair of chromatids is attached.

4. The period of growth in between cell divisions is called _____.

5. Write the names of each of the four phases of the cell cycle:

Cell growth =

DNA replication =

Preparation for mitosis =

Mitosis and Cytokinesis =

6. The division of the nucleus during the M phase of the cell cycle is called _____.

7. What happens during the G1 phase?

8. What happens during the S phase?

9. What happens during the G2 phase?

10. The name for the two tiny structures located in the cytoplasm near the nuclear envelope at the beginning of prophase in the blank to the left.

a. centrioles

b. spindles

c. centromeres

d. chromatids

11. What is the spindle?

Match the description of the event with the phase of mitosis it is in. Each phase may be used more than once.

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

12. ____ The chromosomes move until they form two groups near the poles of the spindle.

13. ____ The chromosomes become visible.

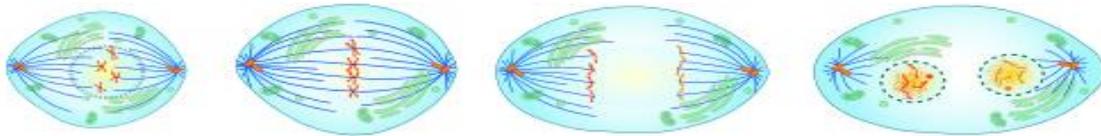
14. ____ A nuclear envelope re-forms around each cluster of chromosomes

15. ____ The centrioles take up positions on opposite sides of the nucleus.

16. ____ The chromosomes line up across the center of the cell.

17. ____ The nucleolus becomes visible in each daughter nucleus.

18-21 Label each phase.



22. What is cytokinesis?

23. How does cytokinesis occur in most animal cells?_

24. Write the letter of what forms midway between the divided nucleus during cytokinesis in plant cells in the blank to the left.

a. cell nucleus b. cytoplasm c. cell plate d. cytoplasmic organelles