Chapter 10 Cell Growth and Division

Completion On the lines provided, complete the following sentences.
1. The M phase is also known as ________________.
2. Each pair of chromatids is attached at an area called the ________________.
3. The three phases of ________________ are G1, S, and G2.
4. The ________________ is the series of events that cells go through as they divide and grow.
5. The ________________ is a fanlike microtubule structure that helps separate the chromosomes.
6. ________________ is the division of the cell nucleus.
7. The four phases of mitosis are ________________, ________________, ________________, and ________________.
8. The division of the cytoplasm during the M phase is called ________________.
9. Proteins known as ________________ regulate the timing of the cell cycle in eukaryotic cells.
10. ________________ is a disorder in which some of the body's own cells lose the ability to control growth.

Multiple Choice On the line provided, write the letter that best completes the statements or answers the question.

11. What process ensures that each daughter cell gets one complete set of genetic information and that each daughter cell also has increased surface area?
   a. cell division          c. cytokinesis
   b. mitosis                d. cancer

12. Before cell division, each chromosome consists of two identical "sister"
   a. centromeres.          c. chromatids.
   b. cell cycles.          d. spindles.

13. The four phases of the cell cycle are
   a. interphase, mitosis, G1, and G2.
   b. M phase, G1 phase, S phase, and G2 phase.
   c. prophase, metaphase, anaphase, and telophase.
   d. cytokinesis, mitosis, interphase, and metaphase.

14. What phase of mitosis takes the longest period of time?
   a. prophase          c. anaphase
   b. cytokinesis        d. interphase
15. What part of the cell separates and takes up positions on opposite sides of the nucleus during prophase?
   a. centrioles
   b. centromeres
   c. chromatids
   d. spindles

16. What phase of mitosis usually occurs at the same time as cytokinesis?
   a. anaphase
   b. telophase
   c. prophase
   d. cell division

17. What is the name for tumors that form and can cause damage to surrounding tissue?
   a. cyclins
   b. mitosis
   c. cytokinesis
   d. cancer

**Labeling Diagrams** On the lines below, label the events in the cell cycle that correspond with the numbers in the diagram.

18. ___________________________ 22. ___________________________
19. ___________________________ 23. ___________________________
20. ___________________________ 24. ___________________________
21. ___________________________ 25. ___________________________