

Assessment

Chapter Test

Cell Growth and Division

In the space provided, write *T* if the statement is true or *F* if it is false.

- _____ 1. DNA stores hereditary information in a cell.
- _____ 2. In a histone core, DNA wraps around a nucleosome cord.
- _____ 3. In both prokaryotes and eukaryotes, DNA is packed and organized into structures called chromosomes.
- _____ 4. If a cell starts using checkpoints, the cell might begin to divide so fast that nothing can stop its growth.
- _____ 5. During cytokinesis, a cell's cytoplasm divides.

Circle the term that best completes each sentence.

- 6. (Genes, Chromatids, or Cells) are strands of copied genetic material.
- 7. The units of heredity that each code for a protein and RNA are called (genes, chromosomes, or chromatin).
- 8. During (interphase, mitosis, or cytokinesis), the nucleus of a cell doubles.
- 9. (Interphase, Mitosis, or Synthesis) is the longest phase of the cell life cycle.

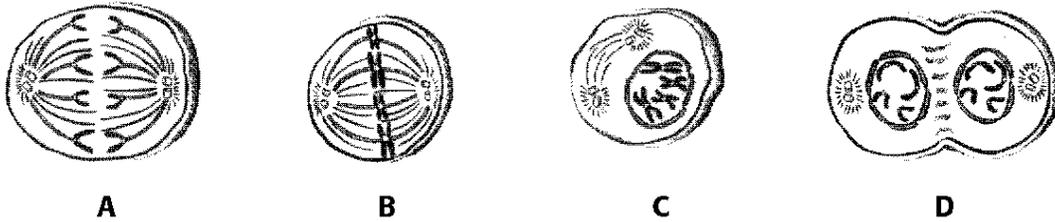
Using the word bank below, fill in each blank provided.

cancer centromere centrosome tumor

- 10. _____ is a group of diseases in which cell growth is rapid and uncontrolled.
- 11. The structure that directs the movement of chromosomes in a dividing cell is called the _____.
- 12. A mass of cells that divide quickly but otherwise do not work well is called a _____.
- 13. The region where sister chromatids are attached is the _____.

Chapter Test *continued*

Questions 14–17 refer to the figure below, which shows the stages of mitosis. In the space provided, write the letter of the correct answer to each question.



- _____ 14. Which of the above pictures shows the first step in mitosis?
 A. B. C. D.
- _____ 15. Which of the above pictures shows the last step in mitosis?
 A. B. C. D.
- _____ 16. In which picture are the centrosomes in the process of moving to opposite sides of the cell?
 A. B. C. D.
- _____ 17. In which picture are the sister chromatids in the process of moving to opposite sides of the cell?
 A. B. C. D.

Using the word bank below, fill in each blank provided.

chromatin histone interphase spindle

18. The kind of protein that aids in packing DNA in eukaryotic cells is called a(n) _____.
19. The combination of DNA and proteins found in eukaryotic cells is called _____.
20. Altogether, the time spent in G_1 , S, and G_2 is called _____.
21. During cell division, the movement of chromosomes is helped by a structure called the _____.

Chapter Test *continued*

Circle the term or phrase that best completes each sentence.

22. If everything is right for cell division, the cell passes the G₁ checkpoint; next the cell copies its (RNA, DNA, or proteins).
23. G₁ phase, S phase, G₂ phase, mitosis, and cytokinesis are the five phases of the (gene, chromosome, or cell) cycle.
24. The difference between a prokaryote and a eukaryote is that the prokaryote has a single chromosome in the shape of (an X, a loop, or a cube).
25. The difference between dividing animal cells and dividing plant cells is the lack of a cell (membrane, plate, or protein) in animal cells.