

Mitosis Practice Test Answer Key

1. d
2. c
3. a
4. d
5. d
6. b
7. a
8. c
9. c
10. d
11. 3; group of eight histones that form a disc that DNA wraps around
12. 1; nucleic acid that contains the genetic code
13. 6; loops formed of nucleosome cords that are attached to a protein scaffold
14. 5; string of nucleosomes coiled to form a cord 30 nm in diameter
15. 2; protein molecule found in the chromosomes of eukaryotic cells
16. 7; strand of fully condensed DNA ready for cell division
17. 4; structural unit of chromatin made up of DNA wrapped around a histone core
18. gene
19. chromatin
20. centrosome
21. spindle
22. centromere
23. Cancer
24. cell cycle
25. DNA synthesis (or DNA replication or DNA copying)
26. interphase
27. mitosis
28. cytokinesis
29. M, C
30. G₁, S
31. Each cell enters the G₁ phase of interphase, during which it grows rapidly and builds more organelles.
32. Cell size is limited by two things: (1) the ability of the cell to exchange substances with the environment and to get substances to where they are needed within the cell and (2) the ability of the cell to copy the DNA instructions to make proteins in a timely fashion.
33. A tumor is a mass of defective cells that have an uncontrolled cell cycle. A benign tumor does not spread to other parts of the body. Benign tumors are usually easy to remove. Cells in malignant tumors invade and destroy nearby healthy tissues and organs; they can also break loose and spread to other parts of the body.