

TEACHER NOTES AND ANSWERS

Section 5.1

1. gap 1
2. cell growth, normal functions, replications of organelles
3. synthesis
4. copies DNA
5. gap 2
6. additional growth and carrying out of normal functions
7. mitosis
8. cell division
9. prophase
10. metaphase
11. anaphase
12. telophase
13. cytokinesis
14. mitosis
15. interphase

Cells divide at different rates

Rates of cell division vary widely and are linked to the body's need. The length of gap 1 varies most widely among cell types. Some cells, such as neurons, enter a stage called G₀, where cells are unlikely to divide again.

Cell size is limited

If cells were too small, they could not contain all the organelles and molecules necessary for life. If cells were too large, they could not move enough materials across the membrane surface. To maintain a suitable size, cell growth and division must be coordinated.

The smallest cube should be circled.

Section 1: The Cell Cycle

PowerNotes

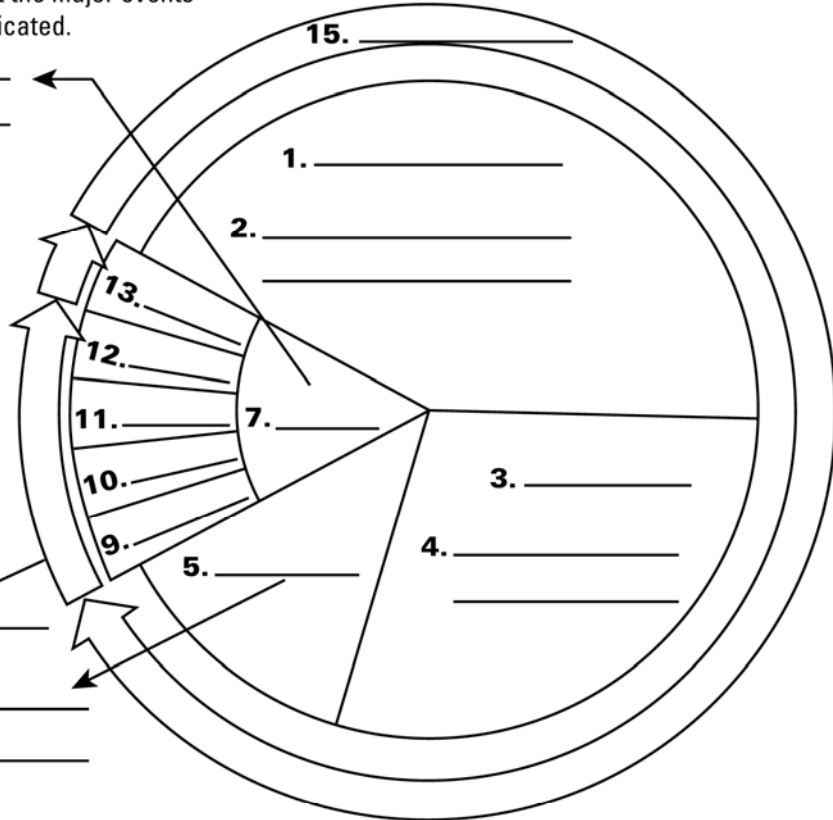
Cell Cycle

Label each step and list the major events of each step where indicated.

8. _____

14. _____

6. _____



Cells divide at different rates.

Cell size is limited.

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Circle the cube with the greatest surface area-to-volume ratio.