

Chapter 2

Lesson 1

Page 16

1. State How many sets of chromosomes are in a nucleus? (Circle the answer.)

a. 1

b. 2

c. 3

P(1)

2. Highlight the stage of the cell cycle during which organelle replication takes place.

During the final stage of interphase, the G2 stage, cells continue to grow and carry out cellular functions. Cells also replicate organelles during this stage. Some organelles can replicate themselves because they contain their own DNA.(P3) page 16

3. Explain How do multicellular organisms grow?

Multicellular organisms grow by making more cells and replacing cells that die. Through mitosis and cell division, new cells replace short-lived cells. Some organisms reproduce by mitosis and cell division. When this happens, the offspring are identical to the parent. (p2) page 17

4. Identify What is the third phase of mitosis?

Anaphase is the third phase of mitosis.(p3) page 17

5. Describe What happens during metaphase?

During the second phase of mitosis, called metaphase, the replicated chromosomes move to the middle of the cell. The pairs of sister chromatids line up end-to-end across the center of the cell. This happens because hairlike fibers pull and push the chromosomes to the middle of the cell.(p3) page 17

6. Define What are daughter cells?

Cytokinesis is the final stage of the cell cycle. During cytokinesis, the cytoplasm and its components divide to form two identical cells called daughter cells.(p1) page 18

7. Explain What happens to the parent cell of an organism after mitosis and cell division?

After mitosis and cell division, the original cell—called the parent cell—no longer exists.(P1) Page 19

8. Estimate Approximately how much of the cell cycle is interphase?

Approximately $\frac{3}{4}$ th of cycle is interphase.

Commented [1]: Where is your citation?

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1. Identify Highlight one structure of the prokaryote and suggest that structure's function.
Cell membrane regulates movement of substances into and out of a cell.(page10) the chart.

3. Define What is a stem cell?

Some cells in your body are undifferentiated. These cells, called stem cells, can become different types of cells. For example, there are stem cells in the middle of some of your bones. Under the right conditions, these cells could become other types of cells. Differentiated cells cannot become any other type of cell.(p2) page 22

4. Identify Name other organs in your body that must work together to perform a function.
Your heart, lungs, brain, stomach, and muscles are all examples of organs in your body. A Muscle, such as the bicep in your upper arm, is made of bundles of muscle fiber tissue. These cells in the muscle tissue must work together to contract and relax, allowing your arm to move.(p6) page 22

Commented [2]: Recheck this response. You did not answer the question: Name other organs in your body that must work together to perform a function.

5. Identify What is the function of skin?

Skin protects the body and maintain homeostasis in our bodies.(page23) the chart

6. Determine Organ systems are dependent on what to function properly?
(Circle your answer.)

- a. other organ systems
- b. multicellular organisms

Commented [3]: Where is your textual evidence and citation?