

Name _____

Date _____

Warm-Up: Cell Growth & Reproduction

_____ 1. Which statement describes the chromosome shown in Figure 5.2?



FIG. 5.2

- a. It is made up of two centromeres.
 - b. It is made up of two chromatids.
 - c. It is made up of two telomeres.
 - d. It is made up of two histones.
- _____ 2. During interphase a cell grows, duplicates organelles, and
- a. copies DNA.
 - b. divides the nucleus.
 - c. produces a new cell.
 - d. divides the cytoplasm.
- _____ 3. During which of the following stages shown in Figure 5.1 does the cytoplasm of a cell divide?

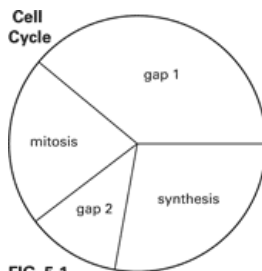


FIG. 5.1

- a. mitosis
 - b. gap 2
 - c. synthesis
 - d. gap 1
- _____ 4. Why do the cells lining the stomach divide more quickly than those in the liver?
- a. They need much more surface area.
 - b. They have fewer chromosomes.
 - c. They undergo more wear and tear.
 - d. They are much smaller cells.
- _____ 5. If a cell cannot move enough material through its membrane to survive, then the ratio of its surface area to volume is

- a. growing too quickly.
- b. too small.
- c. just the right size.
- d. too large.

___ 6. Before a cell can move from the G₁ or G₂ stage to the next stage of the cell cycle, it must grow and

- a. double in size.
- b. duplicate its DNA.
- c. complete interphase.
- d. pass a critical checkpoint.

___ 7. What does a cell make during the synthesis stage of the cell cycle?

- a. daughter cells
- b. more organelles
- c. a copy of DNA
- d. greater surface area

___ 8. Which statement is true of the chromosome shown in Figure 5.2?



FIG. 5.2

- a. Its telomeres have been shortened due to repeated cell division.
- b. Its sister chromatids have spindle fibers attached.
- c. Its centromere has been lost during the copying of DNA.
- d. Its left and right halves carry identical genetic information.

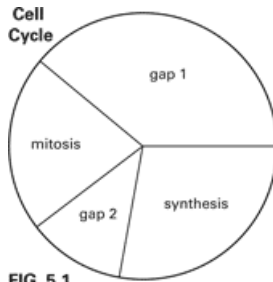
___ 9. Before a cell can proceed to mitosis from the gap₂ stage of the cell cycle, it must

- a. undergo cytokinesis.
- b. double in size.
- c. pass a critical checkpoint.
- d. complete a full cell cycle.

___ 10. Multicellular organisms use mitosis for growth, development, and

- a. repair.
- b. apoptosis.
- c. reproduction.
- d. interphase.

___ 11. During which of the following stages shown in Figure 5.1 does cytokinesis take place?



- a. mitosis
 - b. synthesis
 - c. gap 1
 - d. gap 2
- ___ 12. Molecules that control the stages of the cell cycle in all eukaryotes are similar. This fact suggests that
- a. cells of eukaryotes rarely divide.
 - b. eukaryotes share a common ancestry.
 - c. binary fission and mitosis are the same.
 - d. rates of cell division are uniform.
- ___ 13. The gap 1, gap 2, and synthesis stages of the cell cycle make up
- a. mitosis.
 - b. cytokinesis.
 - c. interphase.
 - d. telophase.
- ___ 14. In a single-celled organism, mitosis is used for
- a. reproduction.
 - b. development.
 - c. repair.
 - d. growth.