Name _____ Class _____ Date _____

SECTION 8-2 REVIEW

CELL DIVISION

VOCABULARY REVIEW **Circle the term that does not belong in each of the following groups, and briefly explain why it does not belong.**

1. G_1 phase, G_2 phase, S phase, telophase _____

_____

2. anaphase, interphase, metaphase, prophase _____

_____

3. binary fission, mitosis, meiosis, cytokinesis _____

_____

4. cleavage furrow, cytokinesis, spindle fiber, cell plate _____

_____

5. centrioles, vesicles, kinetochore fibers, polar fibers _____

_____

MULTIPLE CHOICE **Write the correct letter in the blank.**

_____ **1.** Prokaryotic cells reproduce by a process called

a. mitosis. **b.** meiosis. **c.** binary fission. **d.** binary fusion.

_____ **2.** In eukaryotic cells, DNA is copied during a phase of the cell cycle called

a. M phase. **b.** S phase. **c.** G_1 phase. **d.** G_2 phase.

_____ **3.** The cytoplasm of a eukaryotic cell divides by a process called

a. mitosis. **b.** meiosis. **c.** replication. **d.** cytokinesis.

_____ **4.** The fibers that extend from centrosome to centrosome during mitosis are

a. polar fibers. **b.** spindle fibers. **c.** kinetochore fibers. **d.** binary fibers.

_____ **5.** In the G_0 phase, cells

a. synthesize DNA.
b. prepare for cell division.
c. exit from the cell cycle.
d. move their chromosomes to the cell equator.

Name _____ Class _____ Date _____

SHORT ANSWER Answer the questions in the space provided.

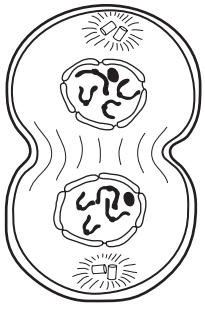
1. List the five main phases of the cell cycle, and briefly explain what occurs during each phase.

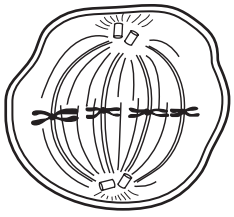
2. List the four phases of mitosis, and briefly explain what occurs during each phase.

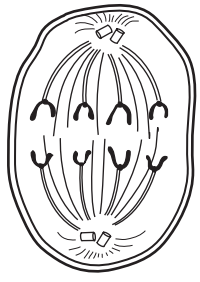
3. Describe cytokinesis in a plant cell. _____

4. **Critical Thinking** What would happen to a cell and its offspring if the cells did not go through a G_1 phase during their cell cycle? Explain. _____

STRUCTURES AND FUNCTIONS In the spaces provided below, label each figure with the phase of mitosis that it represents.







a _____ b _____ c _____ d _____