**Mitosis Quiz**

**Multiple Choice:** Choose the term or phrase that best completes each statement or best answers each question. Write the answer on the sheet provided.

1. Chromosomes are \_\_\_\_.
   1. genetic material
   2. in all living organisms
   3. condensed chromatin
   4. all of the above
2. The period of cell division is called \_\_\_\_\_\_.
   1. interphase
   2. cytokinesis
   3. mitosis
   4. protoplasm
3. Mitosis has \_\_\_\_\_ phases.
   1. one
   2. two
   3. three
   4. four
4. The process where the cytoplasm divides is called \_\_\_\_\_\_.
   1. anaphase
   2. telophase
   3. cytokinesis
   4. prophase
5. The process during which the nucleus of a cell is divided into two nuclei is \_\_\_\_\_\_.
   1. fertilization
   2. disjunction
   3. mitosis
   4. meiosis
6. The first three phases of the cell cycle are called \_\_\_\_.
   1. mitosis
   2. anaphase
   3. interphase
   4. synthesis phase
7. Cell structures made of individual microtubule fibers that are involved in moving chromosomes during cell division are called \_\_\_\_\_.
   1. centrioles
   2. fertilizers
   3. spindles
   4. chromatids
8. Which of the following does NOT play a role in cytokinesis?
   1. cell membrane
   2. golgi apparatus
   3. cell plate
   4. cell wall
9. Which of the following shows the correct sequence of the cell cycle?
   1. C🡪M🡪 G1🡪S🡪G2
   2. S 🡪 G1 🡪 G2🡪 M 🡪 C
   3. G1🡪 S🡪G2🡪 M🡪C
   4. none of the above
10. Sister chromatids are \_\_\_\_.
    1. dense patches within the nucleus
    2. bacterial chromosomes
    3. joined strands of duplicated genetic material
    4. prokaryotic nuclei

**True/False:** After reading each sentence decide whether the statement is true or false. Correct each false statement to make it correct. For extra credit, draw a diagram of a chromosome next to your name on your answer sheet.

1. Chromosomes are the genetic material, which is passed on from one generation to the next.
2. A cell plate forms in cytokinesis in plant cells.
3. Cells are the basic units of life.
4. Cell spends most of their life in prophase.
5. Interphase is the division period of the cell cycle.

**Matching:** In the space provided, write the letter of the phase during which each event occurs. Some answers may be used more than once.

* 1. interphase
  2. prophase
  3. metaphase
  4. anaphase
  5. telophase
  6. cytokinesis

1. The nucleolus begins to disintegrate.
2. Chromatids separate at the beginning of this phase.
3. The chromosomes move toward the center of the cell.
4. A chromatid from each pair is now attached at each pole.
5. The cell grows rapidly.
6. Separate spindle fibers become attached to the centromeres of each chromosome.
7. Separate chromosomes are not clearly visible but the chromatin has become thicker and shorter.
8. A cell plate completely divides a plant cell.

**Short Answer:** Answer each question as completely as possible. Use complete sentences.

1. List the phases of interphase in the order in which they occur. List the major cell activity, which happens during each of those phases. (6 points)
2. Explain why the parent cell and both daughter cells must have the same number of chromosomes. (2 points)