Diagram the major events that take place during each stage of mitotic cell division. Assume that the original cell has two pairs of chromosomes.

Prophase

Metaphase

Anaphase

Date:

Name:

Mitosis (continued)

Telophase

Explain the genetic significance of mitotic cell division.

Class:

Meiosis

In the space provided, diagram the major events that take place in each stage of meiosis I and II, and provide a brief description of the significance of each stage. **Note:** The original cell has a total of two pairs of chromosomes.

Prophase I Metaphase I Anaphase I

Telophase I

Prophase II

Metaphase II

Anaphase II

Telophase II

Gametes

Answer the following questions in the space provided.

1. Distinguish between egg and sperm formation.

2. In humans, describe the structure(s) in which eggs are produced; sperm are produced.

3. Explain the genetic significance of meiotic cell division. Identify the two requirements of meiotic cell division.