

Name _____

Mitosis / Meiosis Test

Period _____

Multiple Choice (27 points)

1. What is Produced by mitosis?
 - a. Two identical cells
 - b. Two nuclei
 - c. Chloroplasts
 - d. Two different cells
2. Which of the following would form a cell plate during the cell cycle?
 - a. Human cell
 - b. Prokaryotic cell
 - c. Plant cell
 - d. All of the above
3. Before mitosis begins
 - a. The nuclear membrane breaks apart
 - b. The DNA is copied
 - c. Chromatids separate
 - d. Chromosomes line up at the center of the cell
4. During the first phase of mitosis
 - a. The nuclear membrane breaks apart
 - b. The DNA is copied
 - c. Chromatids separate
 - d. Chromosomes line up at the center of the cell
5. During interphase what form is DNA in
 - a. Chromatin
 - b. Chromatid
 - c. Chromosome
 - d. Centromere
6. What is produced by cytokinesis
 - a. Two identical cells
 - b. Two nuclei
 - c. Chloroplasts
 - d. Two different cell
7. In the final phase of mitosis
 - a. The chromosomes and other cell materials are copied
 - b. The chromosomes line up at the equator of the cell
 - c. The chromatids separate
 - d. The nuclear membrane forms around the two new sets of chromosomes
8. Cell division is a form of reproduction for which of the following
 - a. Humans
 - b. A Rose bush
 - c. A chicken
 - d. A Paramecium
9. Once mitosis is complete the splitting of the cytoplasm or _____ occurs, creating 2 new cells.
 - a. Endocytosis
 - b. Cytokinesis
 - c. Exocytosis
 - d. Osmosis

Matching (30 points)

1. ____ Interphase
 2. ____ Prophase
 3. ____ Cell plate
 4. ____ Anaphase
 5. ____ Metaphase
 6. ____ Cytokinesis
 7. ____ Telophase
- A. When the cell grows, lives and at the end of this phase the DNA is replicated.
 - B. The chromosomes line up in the middle of the cell
 - C. The chromosomes are pulled apart by spindle fibers to each pole of the cell
 - D. The nuclear membrane begins to re-form and animal cells begin to pinch. Spindle fibers disappear.
 - E. Splits two new plant cells in half, become a cell wall
 - F. When the nuclear membrane dissolves and the centrioles move to each pole
 - G. Dividing of the cytoplasm, creating 2 cells

1. ____ Mitosis
 2. ____ Meiosis
 3. ____ Centrioles
 4. ____ Spindle fibers
 5. ____ Centromere
 6. ____ Chromatin
 7. ____ Four
 8. ____ Two
- A. They are only found in an animal cell, they move to the poles and pull apart chromosome pairs
 - B. The number of cells made by meiosis
 - C. These fibers are what pull the chromosomes apart
 - D. This holds two chromatids together
 - E. Loose DNA, how it is found most of the cells life
 - F. The number of cells made by mitosis
 - G. Cell division when you get half the number of chromosomes. Making sex cells
 - H. Process of replicating the nucleus for cell division, in order to make new body cells

Short Answer (43 points)

1. If a butterfly has 12 chromosomes, how many chromosomes are in a: (4pts)

_____ Sex Cell

_____ Body cell

_____ Fertilized egg

_____ Wing cell

2. What are the 3 stages of the cell cycle? (3 pts)

3. What are the 4 phases of Mitosis, in order (5 pts)

4. What would happen if cytokinesis was skipped? Draw what the resulting cell look like. (4 pts)

5. A Human body cell has 46 chromosomes, based on this answer the following: (4 pts)

Mitosis results in _____ daughter cells each containing _____ chromosomes

Meiosis results in _____ daughter cells each containing _____ chromosomes.

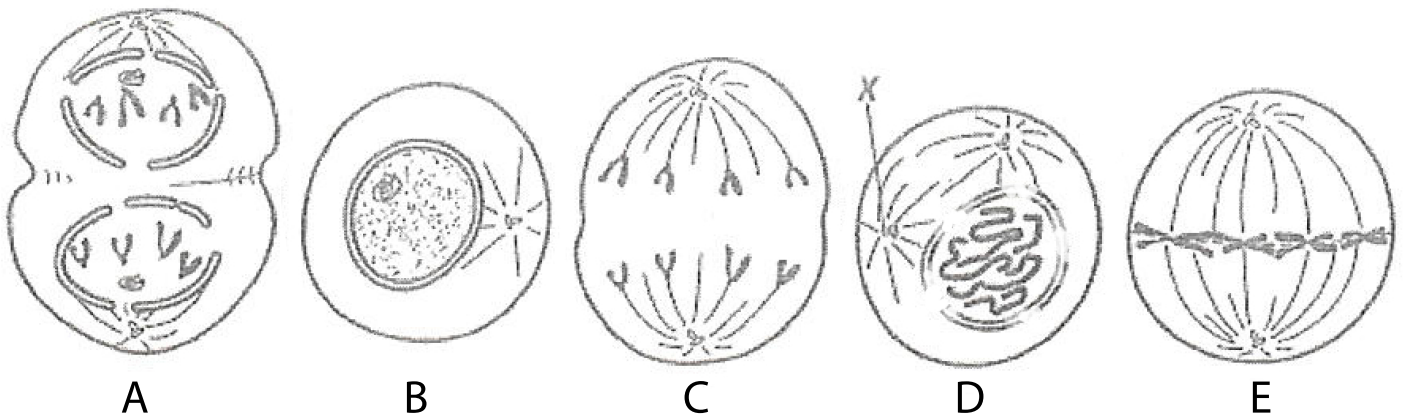
6. What is an example of a cell that results from meiosis _____ (2pts)

7. What are the three purposes for mitosis (cell division) (3pts)

8. What does the cell plate eventually become as the cell develops _____ (2 pts)

9. After cytokinesis what phase do the daughter cells enter? _____ (2 pts)

Use the following Diagram to answer the following questions (10 pts)



10. Which letter represents the first phase of mitosis _____

11. Which letter represents the last stage of Mitosis _____

12. Put the above phases in order from first to last. _____

13. What structure is represented by letter X _____

14. Which phase of the cell cycle is not shown above _____

15. Would the above cell represent a plant or animal cell, provide one reason for your answer (4pts)

