

# Assessment: Cellular Division - Mitosis & Meiosis

## Part I: Fill-in-the-Blank

### Word Bank

chromosomes      meiosis      prophase      mitosis      diploid  
haploid      gametes      interphase      metaphase  
anaphase      telophase      cytokinesis

1. The process of cell division that produces two identical daughter cells is called \_\_\_\_\_.
2. The process that produces sex cells with half the number of chromosomes is called \_\_\_\_\_.
3. Before a cell begins dividing, it spends most of its life in \_\_\_\_\_.
4. During \_\_\_\_\_, chromosomes line up across the middle of the cell.
5. During \_\_\_\_\_, sister chromatids are pulled apart and move to opposite sides of the cell.
6. The final stage of mitosis is called \_\_\_\_\_.
7. The division of the cytoplasm is known as \_\_\_\_\_.
8. Sex cells such as sperm and eggs are called \_\_\_\_\_.
9. Cells that contain two sets of chromosomes are \_\_\_\_\_.
10. Cells that contain one set of chromosomes are \_\_\_\_\_.

## Part II: Multiple Choice

11. What is the primary purpose of mitosis?

- A. Produce gametes
- B. Create genetic variation
- C. Growth and repair of tissues
- D. Reduce chromosome number

12. How many daughter cells are produced by mitosis?

- A. 1
- B. 2
- C. 3
- D. 4

- 13. How many daughter cells are produced by meiosis?**
- A. 2
  - B. 3
  - C. 4
  - D. 8
- 14. What type of cells are produced through meiosis?**
- A. Skin cells
  - B. Muscle cells
  - C. Nerve cells
  - D. Sex cells
- 15. During which phase do chromosomes become visible?**
- A. Prophase
  - B. Metaphase
  - C. Anaphase
  - D. Telophase
- 16. In which phase do chromosomes line up in the center of the cell?**
- A. Prophase
  - B. Metaphase
  - C. Anaphase
  - D. Telophase
- 17. Which process results in cells that are genetically identical to the parent cell?**
- A. Meiosis
  - B. Fertilization
  - C. Mitosis
  - D. Mutation
- 18. What is the chromosome number in human body cells?**
- A. 23
  - B. 46
  - C. 92
  - D. 12
- 19. What is the chromosome number in human gametes?**
- A. 46
  - B. 92
  - C. 23
  - D. 12
- 20. Which of the following occurs only in meiosis?**
- A. Chromosome replication
  - B. Cytokinesis
  - C. Production of haploid cells
  - D. Cell growth

**21. Which phase follows metaphase?**

- A. Prophase
- B. Interphase
- C. Telophase
- D. Anaphase

**22. Why is meiosis important?**

- A. It repairs damaged tissue.
- B. It produces genetically identical cells.
- C. It creates sex cells for reproduction.
- D. It increases chromosome numbers.

**23. Which phase occurs before mitosis begins?**

- A. Interphase
- B. Metaphase
- C. Telophase
- D. Anaphase

**24. What structure contains the genetic information of a cell?**

- A. Ribosome
- B. Chromosome
- C. Cell membrane
- D. Cytoplasm

**25. Which statement correctly compares mitosis and meiosis?**

- A. Both produce four daughter cells.
  - B. Mitosis produces gametes.
  - C. Meiosis reduces chromosome number by half.
  - D. Both produce genetically identical cells.
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