

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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