

Name _____

The Marvelous Stages of Mitosis: A Cellular Ballet

Short Answer Key

1. Prophase involves the condensation of chromosomes, breakdown of the nuclear envelope, and the formation of spindle fibers.
2. Metaphase ensures the even alignment of chromosomes at the cell's equator, ensuring an equal distribution of genetic material during division.
3. In animal cells, cytokinesis involves pinching of the cell membrane, while in plant cells, a cell plate forms between the dividing cells.
4. The main sub-stages of interphase are G1 (cell growth), S (DNA replication), and G2 (final preparation for division).
5. Mitosis is essential for growth by creating new cells and for repair by replacing old or damaged cells.

