

Tishk International University
Faculty of Applied Science
Nutrition and Dietetics Department



Mitosis and Meiosis

Human Biology / 5th Lecture
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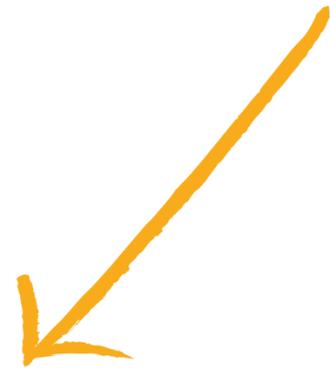
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What is Cell Cycle?

- A cell cycle is a series of events that takes place in a cell as it grows and divides.

Cell Cycle



Interphase (3 stages)

- DNA is not condensed
- No Active Division



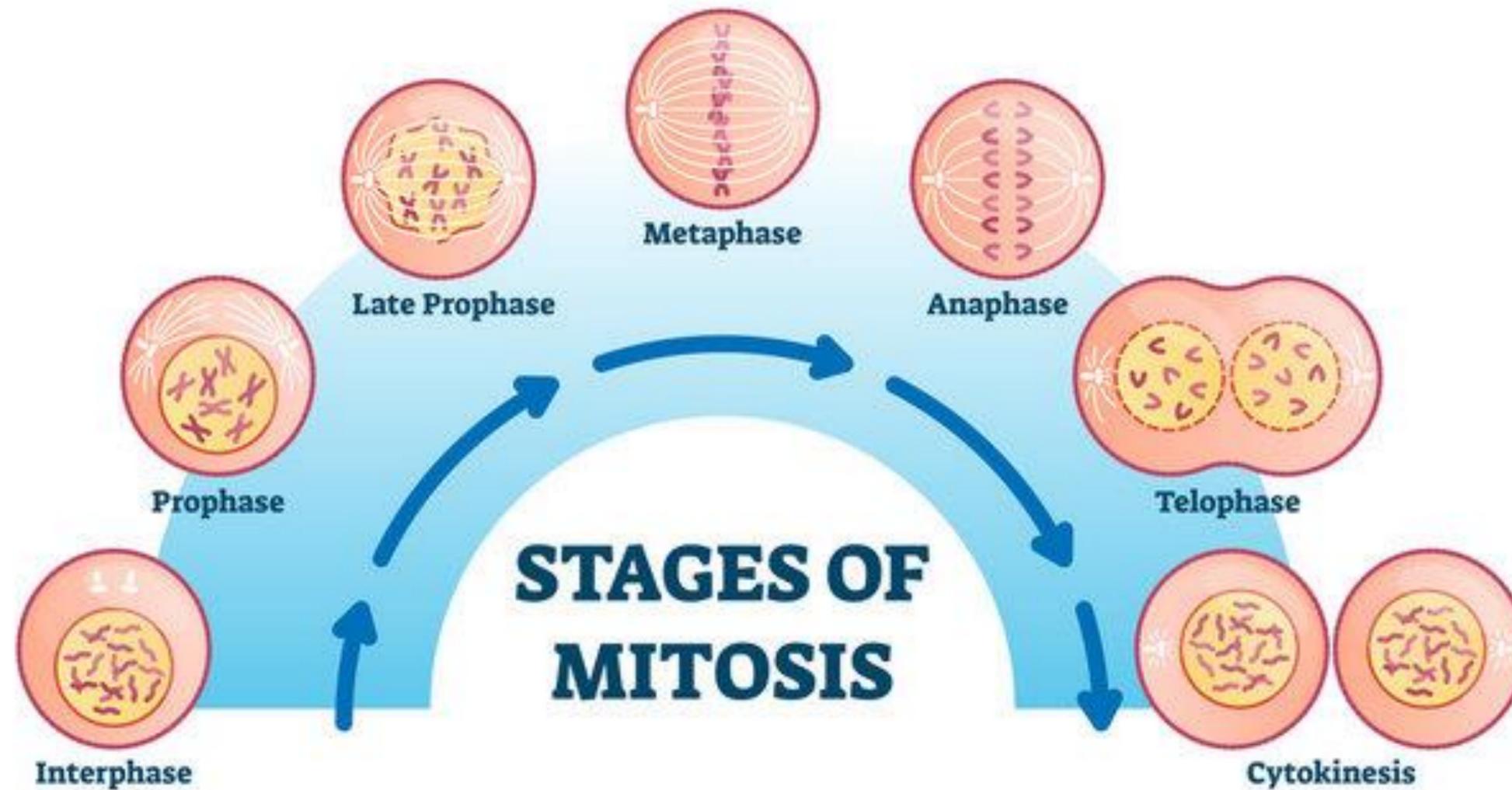
M Phase (4 stages + cytokinesis)

- Nuclear division & division of cytoplasm
- DNA condensed



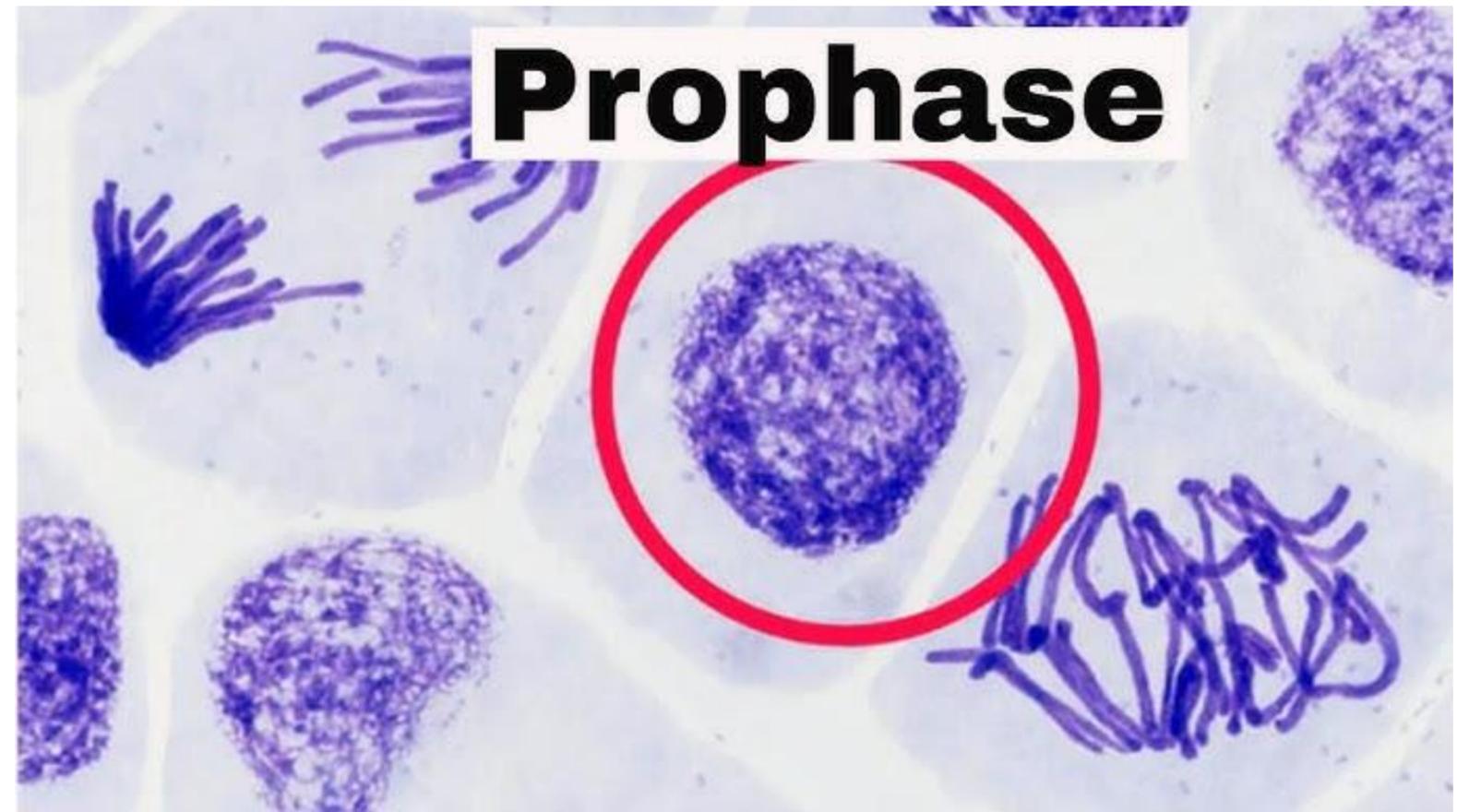
Mitosis and Meiosis

- Also known as **karyokinesis**
- Divided into a series of phases: P. M. A. T.



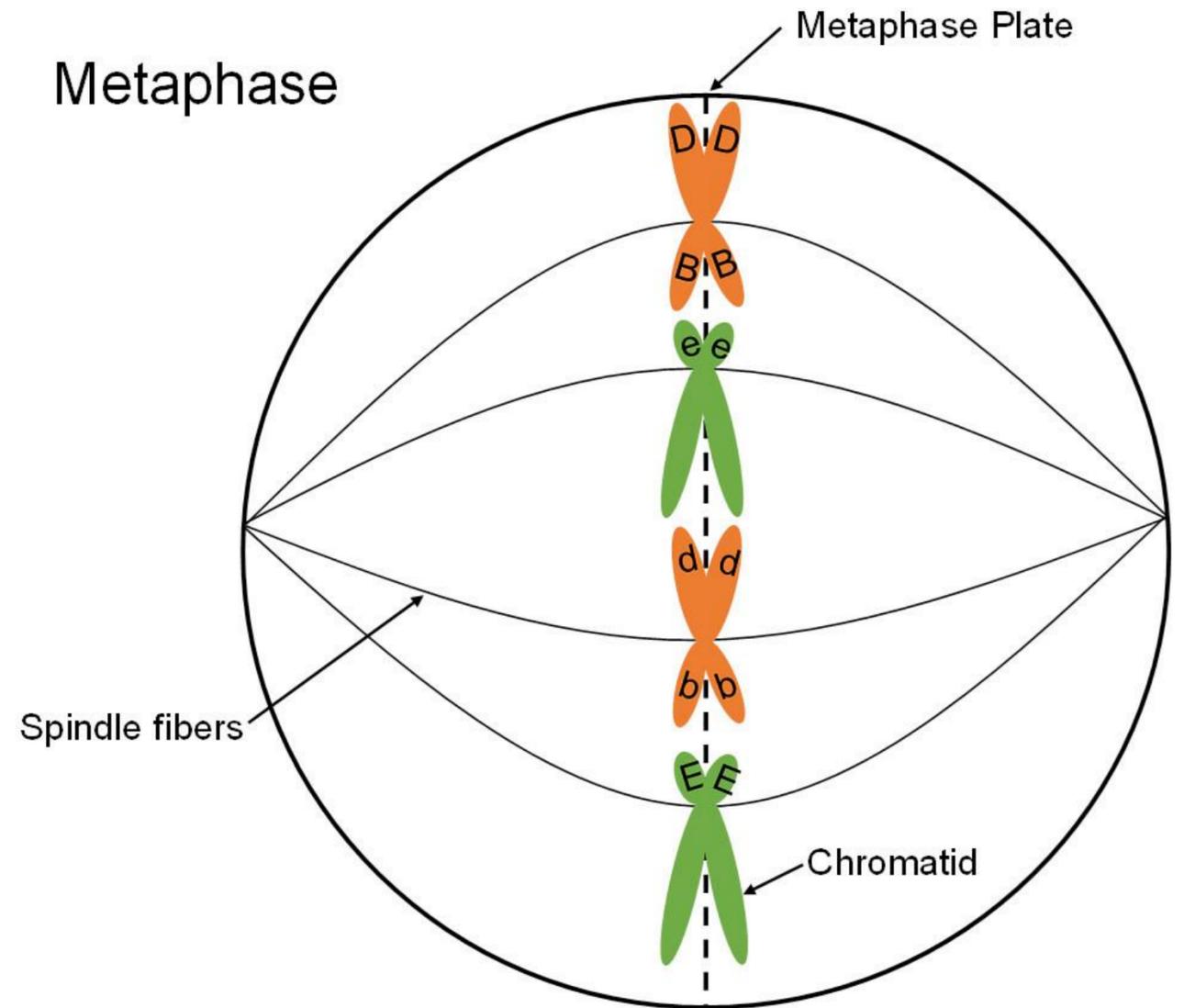
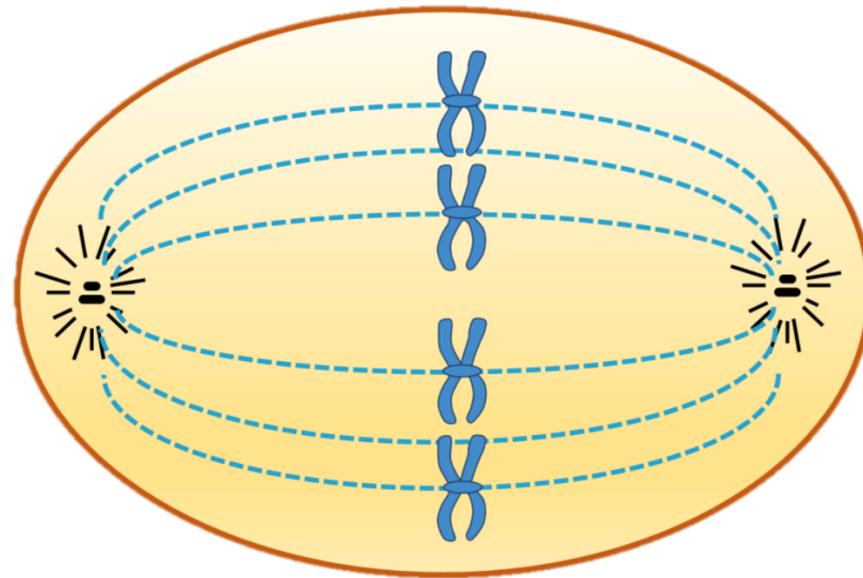
Prophase

- Contain condensed to form chromosomes.
- Chromosomes thickened and became shortened.
- Nuclear envelope breaks down.



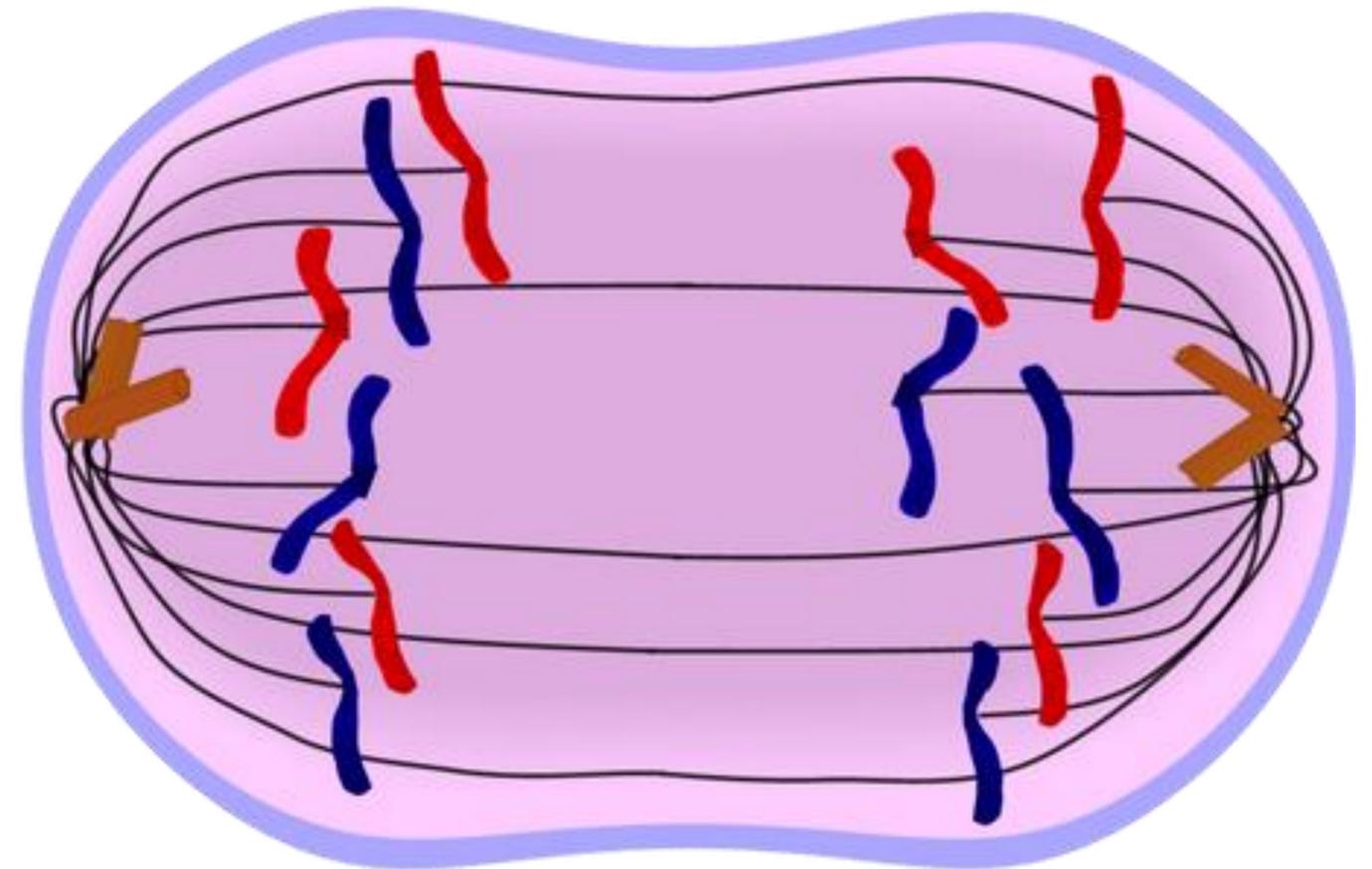
Metaphase

- Centrioles are on opposite ends of the nucleus.
- The nuclear envelope is completely absent.
- Chromosomes are completely attached to the spindle fibers and move toward the ends.



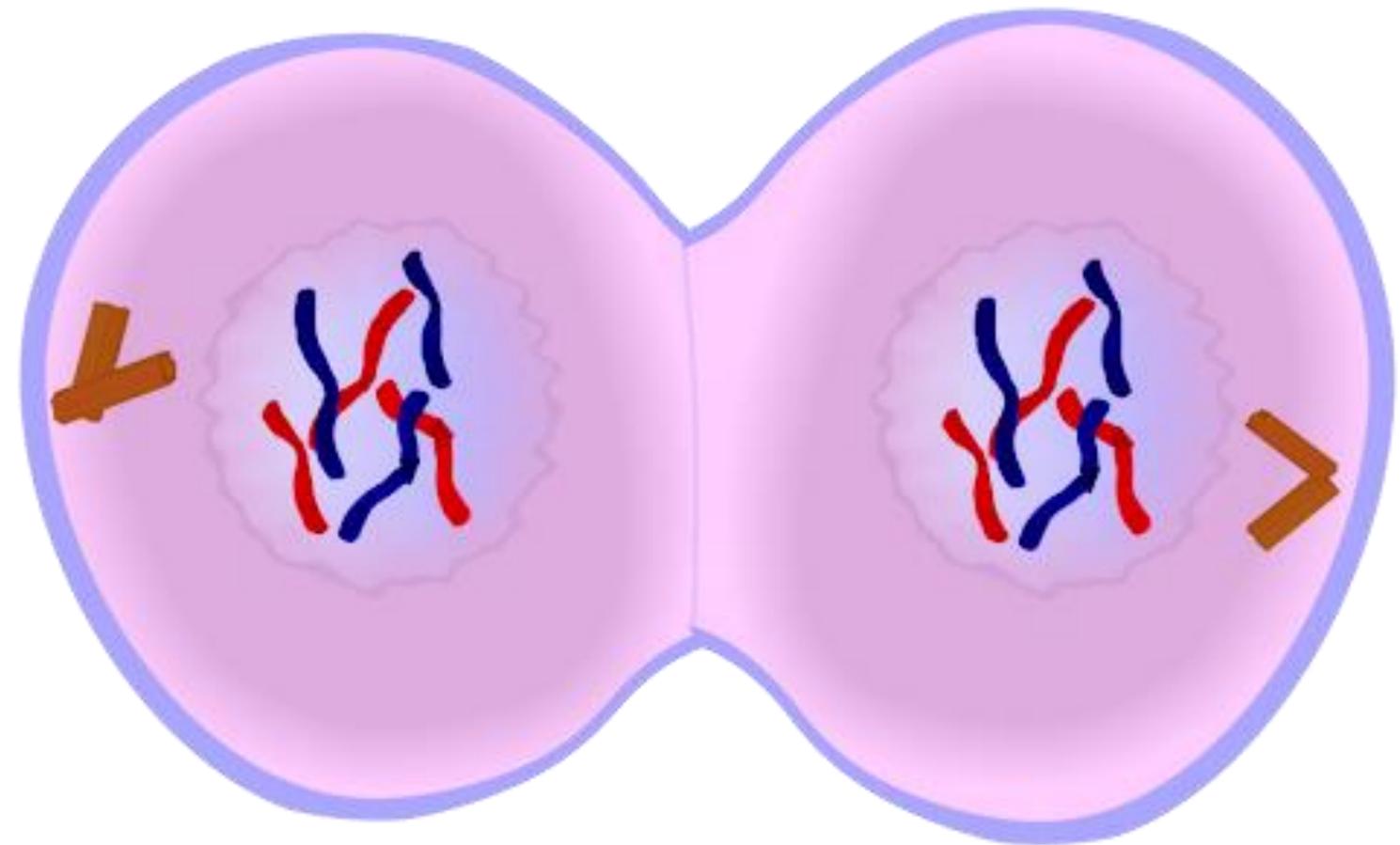
Anaphase

- Sister chromatids start to separate.
- Two identical sets of chromosomes move toward the opposite ends.
- Spindle fibers begin to disappear.



Telophase

- Chromosomes in their respective poles become enclosed in a nuclear membrane.
- Nuclear membrane forms.
- Start cytokinesis.



Cytokinesis

- The cytoplasm of the cell splits into two, making two new cells.

