

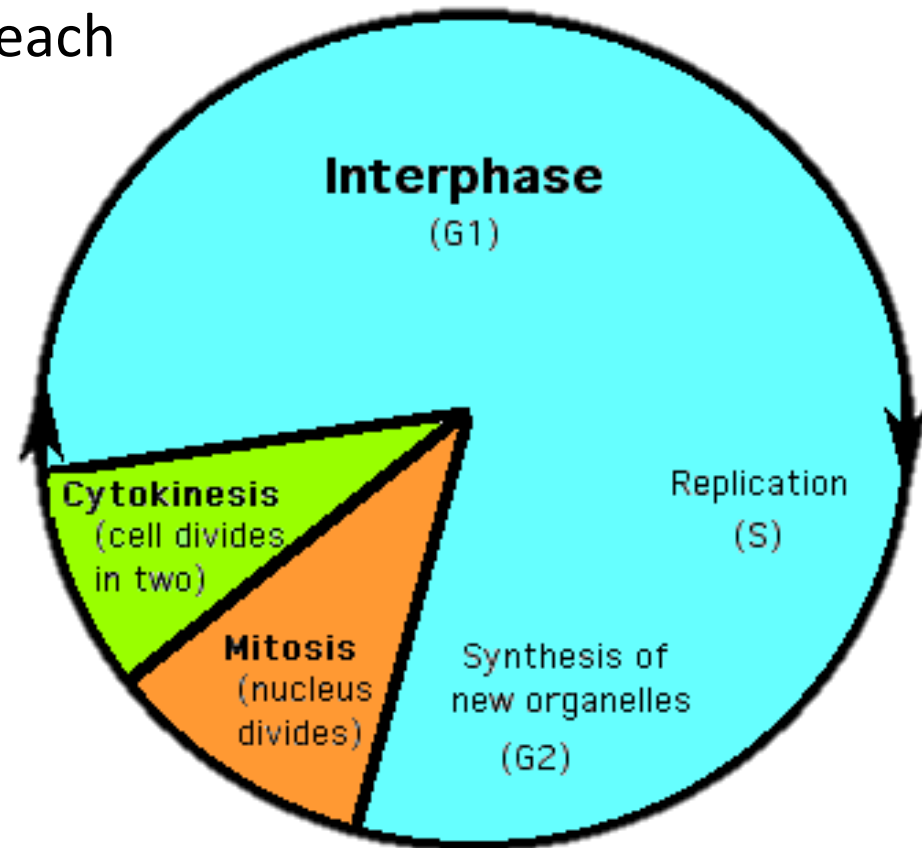
Cell Cycle- Mitosis

Aka- how cells divide

Refresher on the Cell Cycle

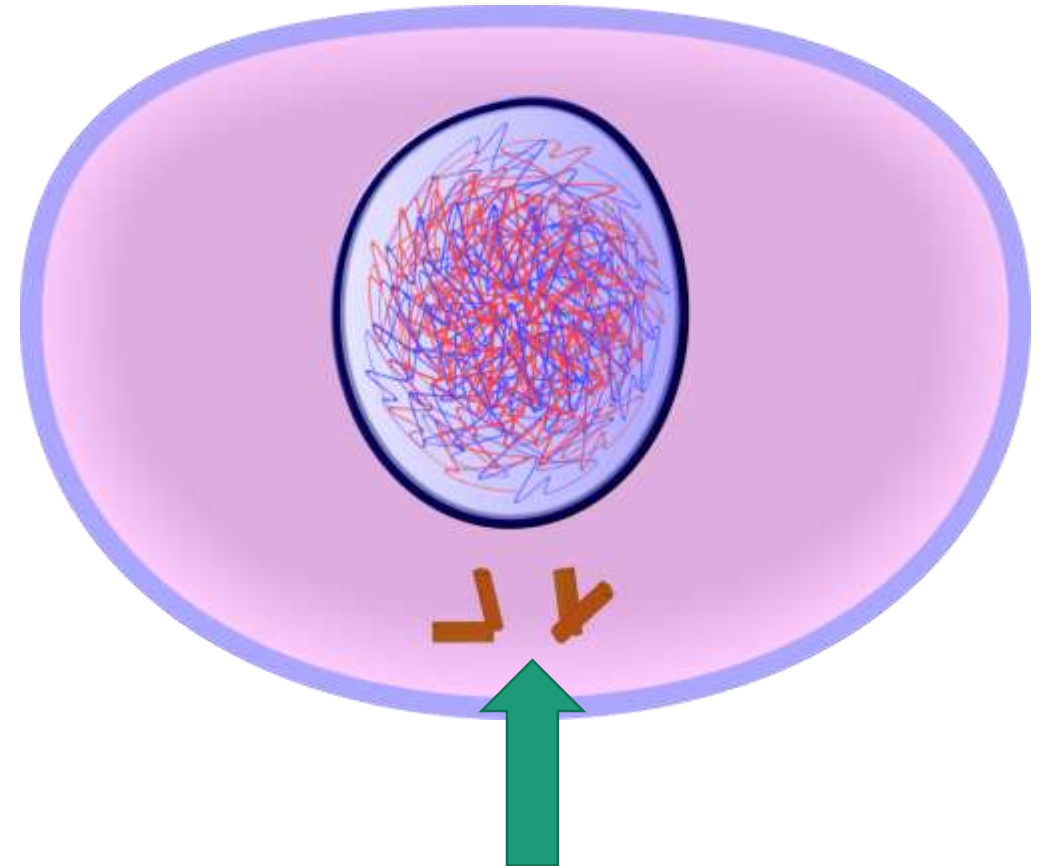
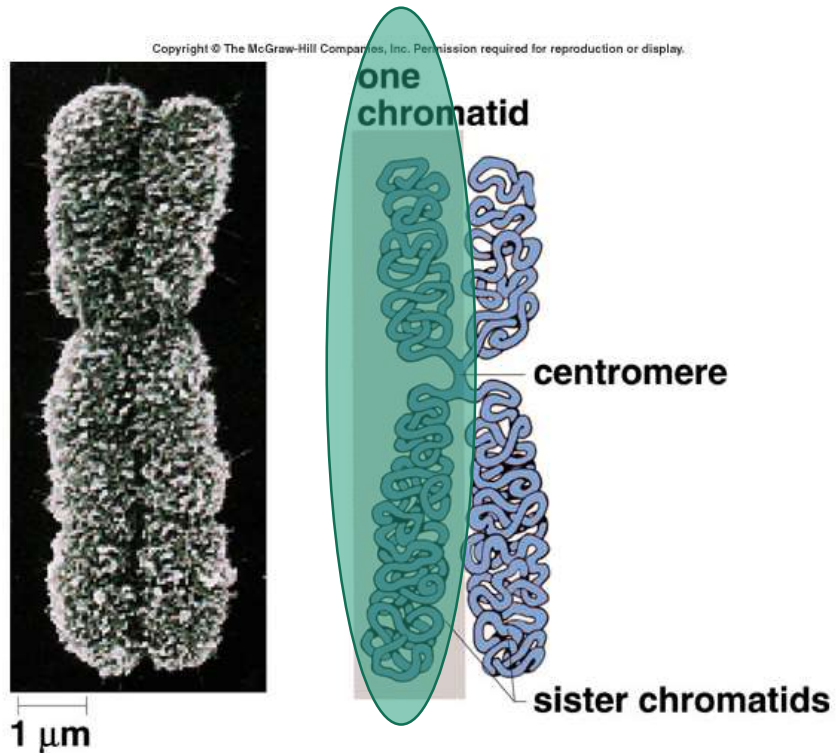
Has three stages

1. Cell grows and copies organelles/chromosomes
2. Chromatids separate (through ***mitosis***)- helps each cell get a copy of each chromosome
3. Cell divides= two cells identical to original cell



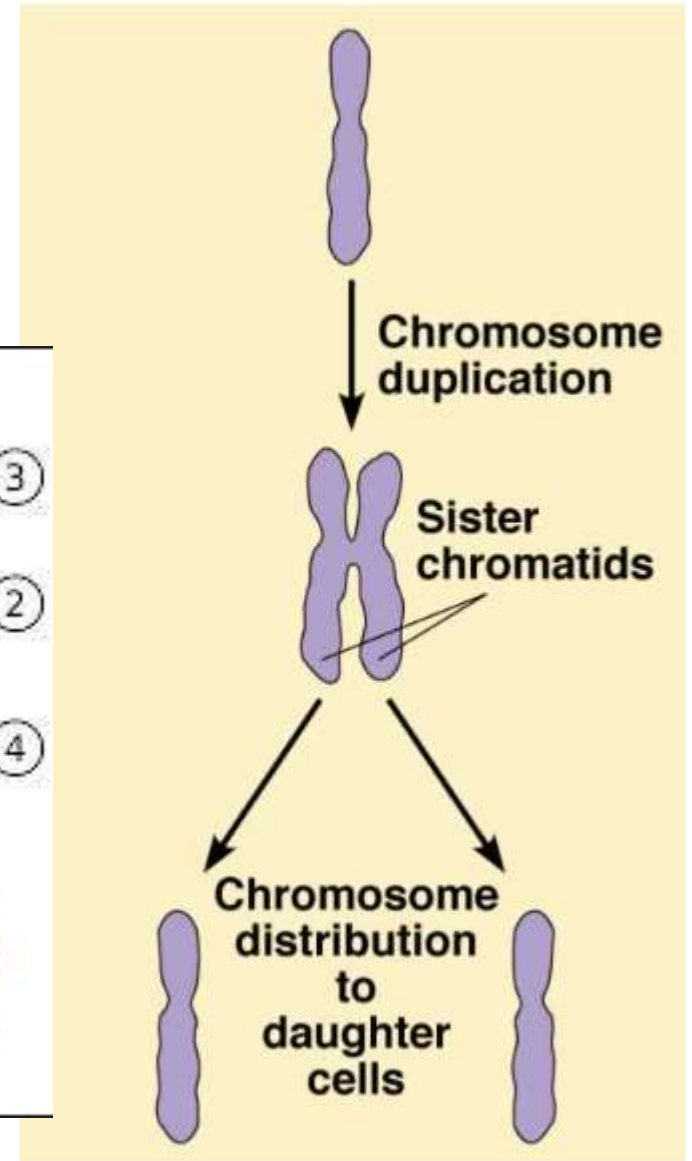
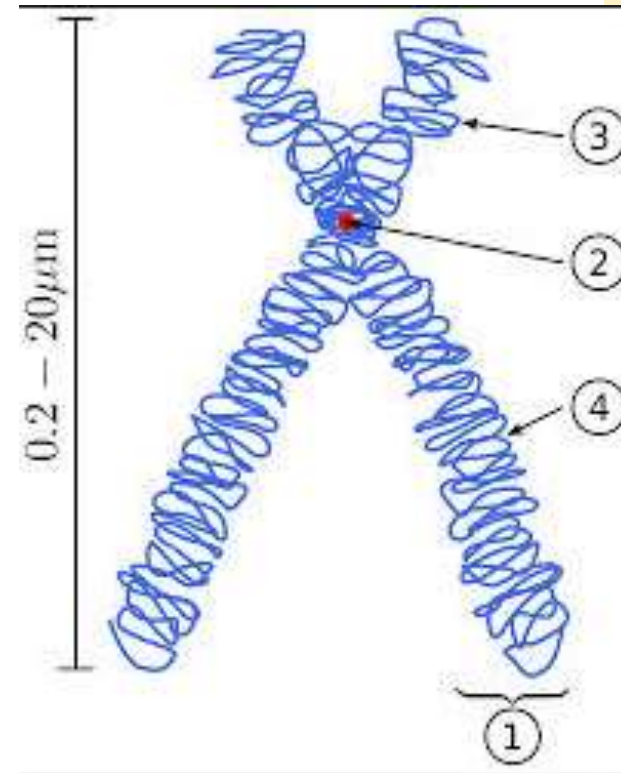
A Closer Look at Stage 2

- **Interphase** (premitosis)
 - **Materials copied**
 - Centrioles copy
 - 1 chromosome = 2 chromatids



- **Interphase** (premitosis)

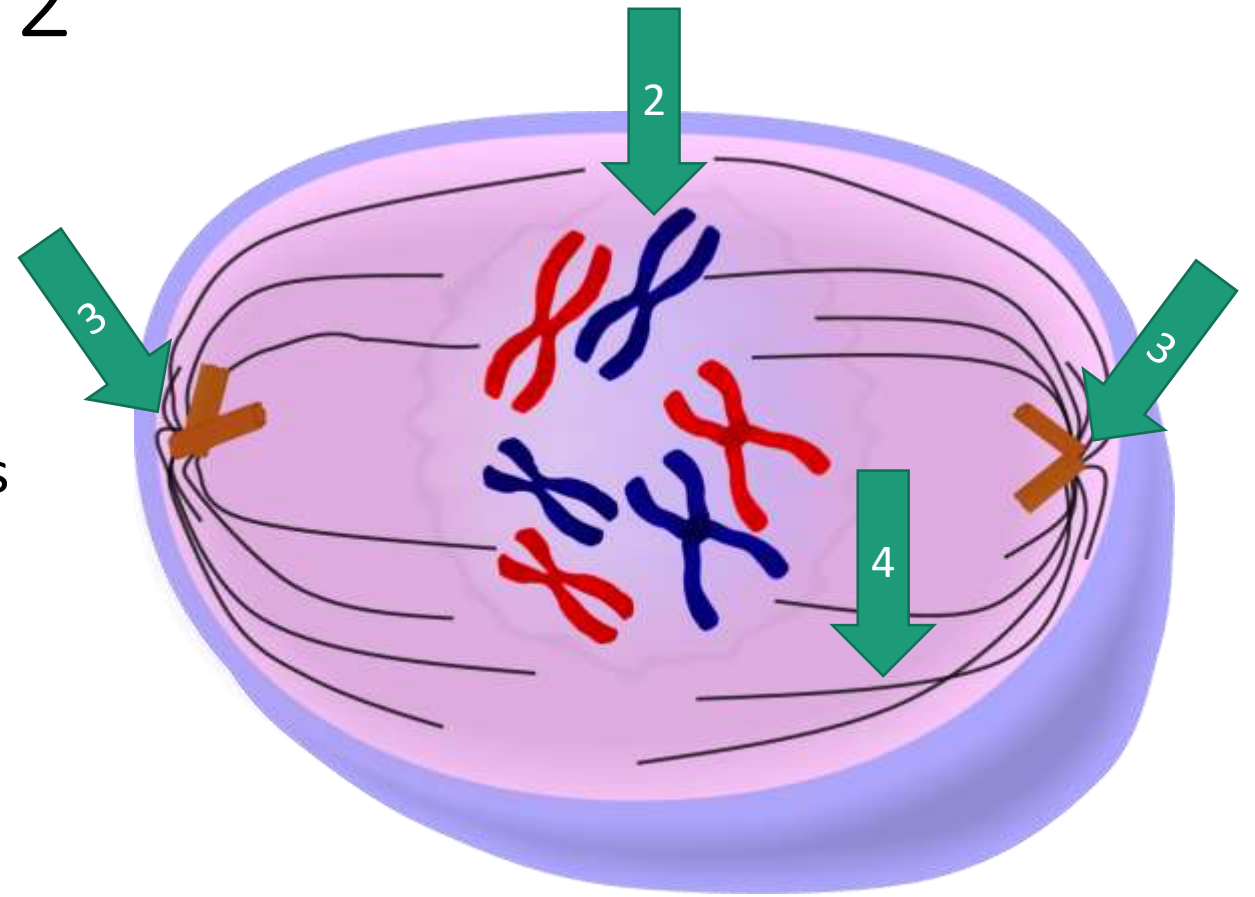
- **Materials copied**
- Centrioles copy
- 1 chromosome = 2 chromatids



A Closer Look at Stage 2

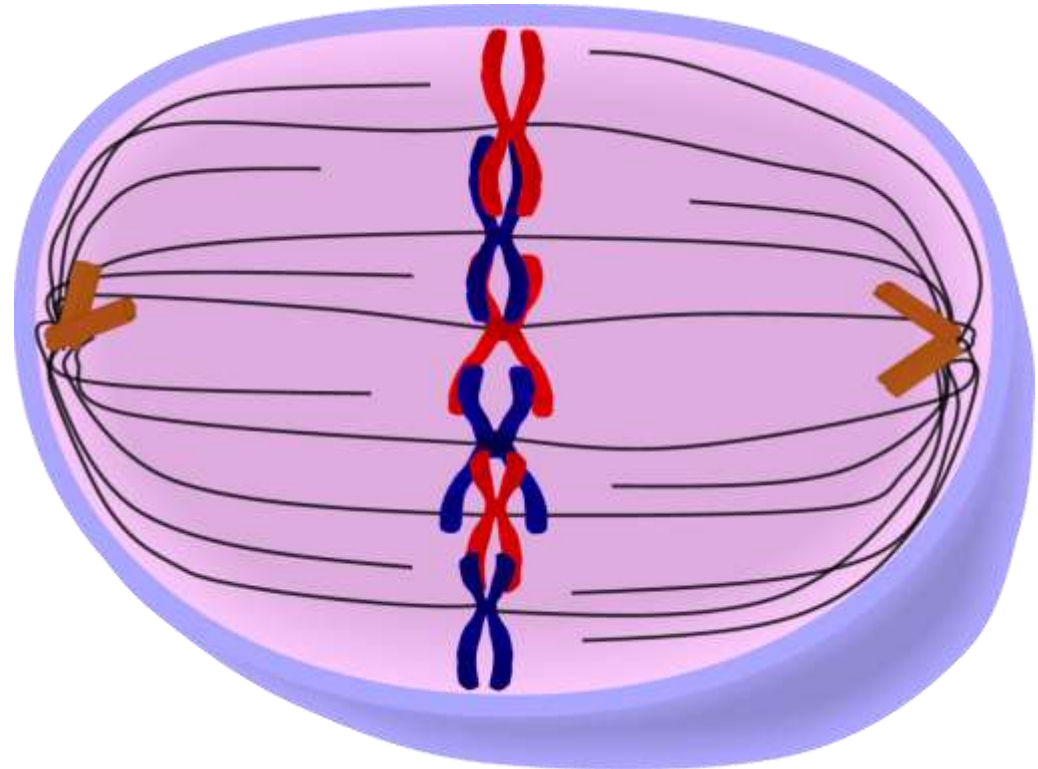
- **Prophase** (mitosis phase 1)

1. Nuclear membrane breaks down
2. Chromosomes condense
3. Centrioles move to opposite ends
4. Fibers attach to centromeres



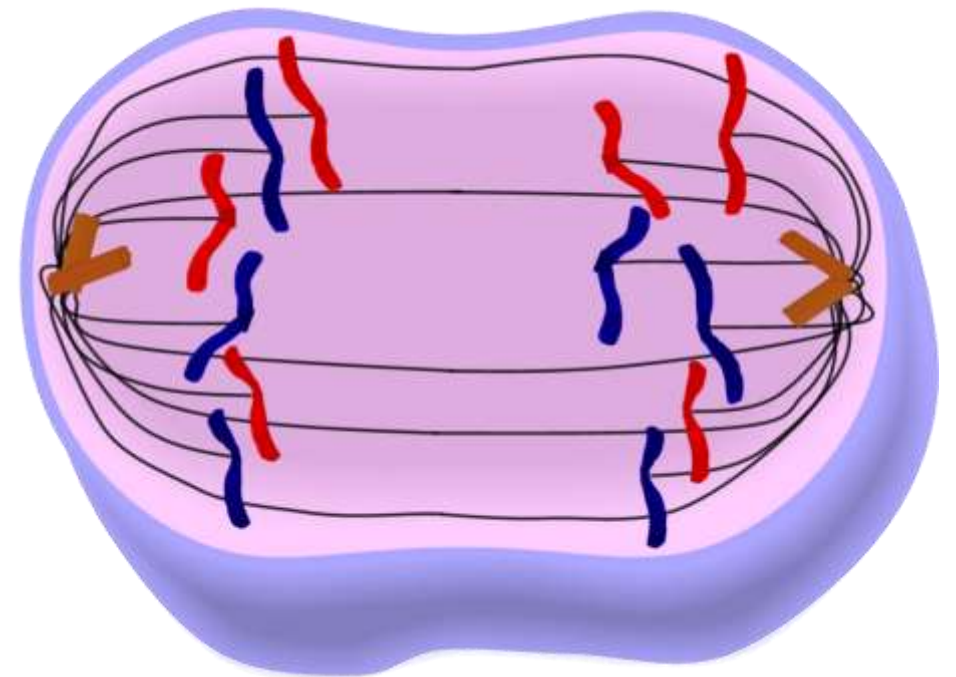
A Closer Look at Stage 2

- **Metaphase** (mitosis phase 2)
 - Chromosomes line up in the middle of the cell
 - Shortest phase



A Closer Look at Stage 2

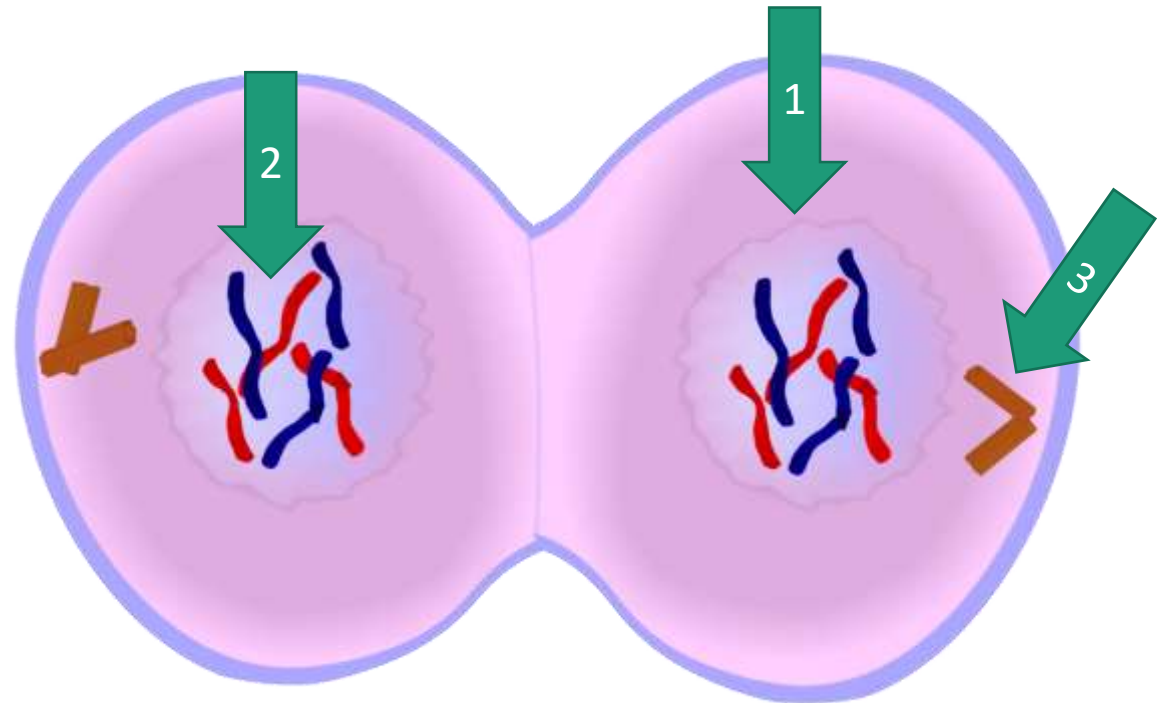
- **Anaphase** (mitosis phase 3)
 - Chromatids separate
 - Are pulled to opposite sides by fibers on centrioles



A Closer Look at Stage 2

- **Telophase** (mitosis phase 4)

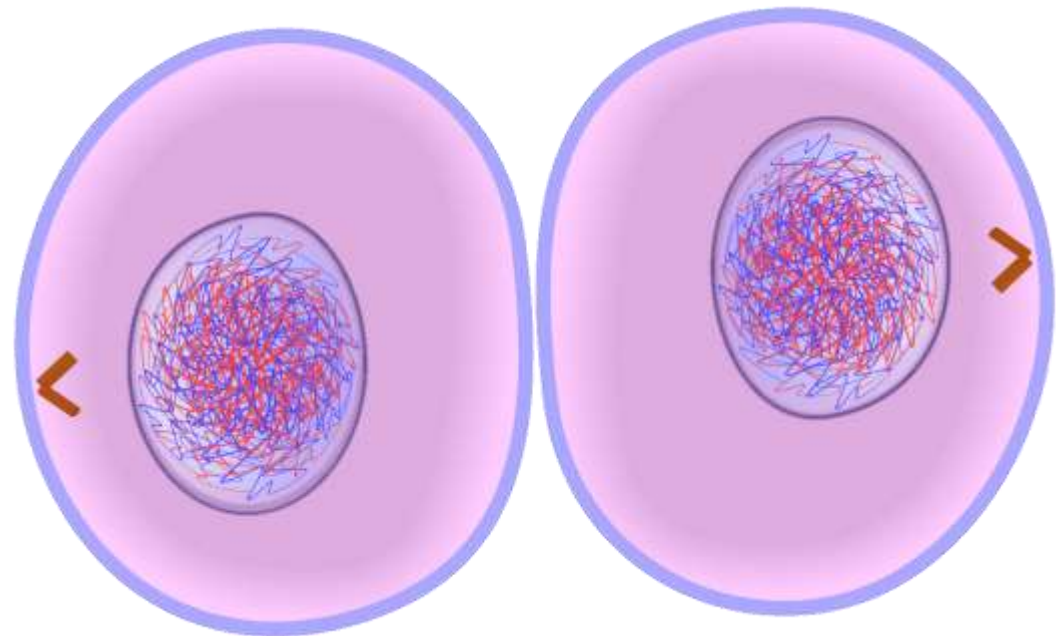
1. Nuclear membrane forms around chromosomes
2. Chromosomes unwind
3. Fibers disappear
4. Mitosis over



Stage 3 (finally!)

- **Cytokinesis**

- Tail end of mitosis
- Cytoplasm splits (pinches in)
- New cells are at the beginning of next cell cycle



[Cell Cycle Dance](#)

[Mitosis Rap](#)

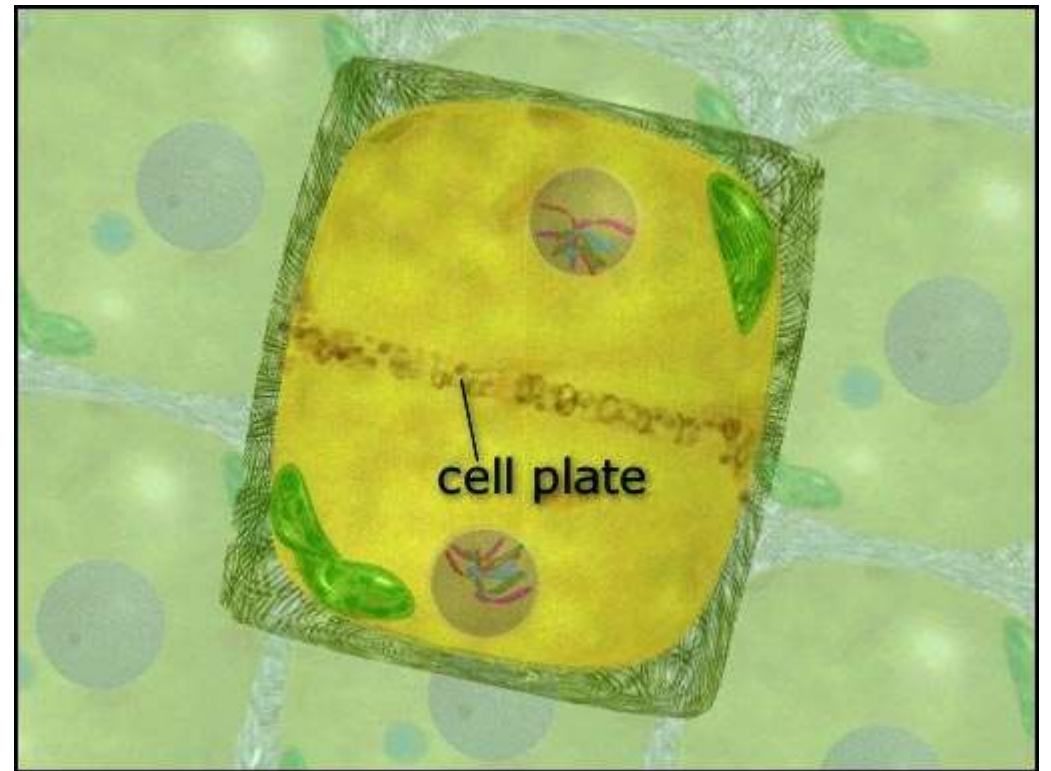
[Cell Cycle and Mitosis 3D Animation](#)

Still don't get it? Watch this video:

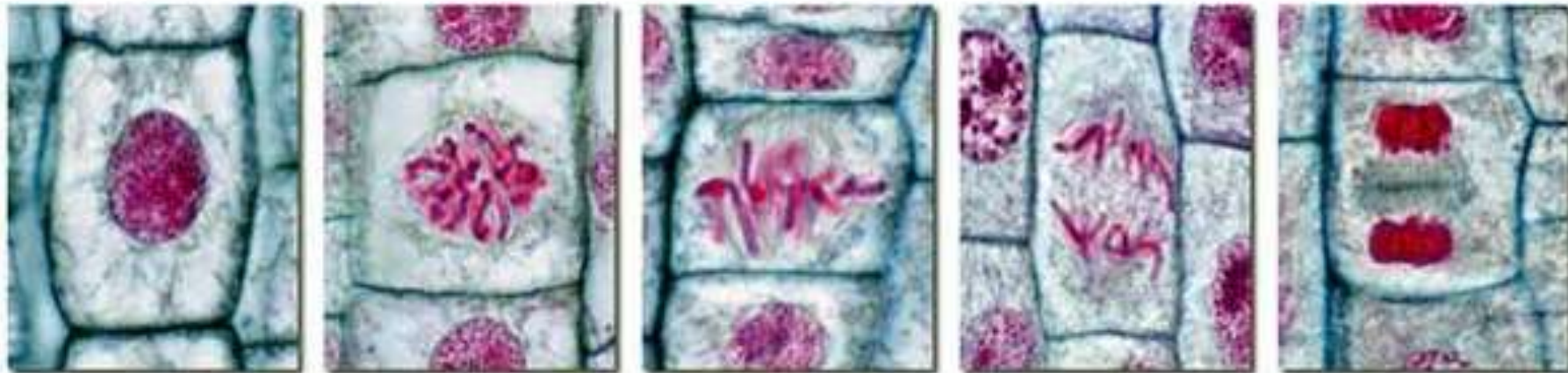
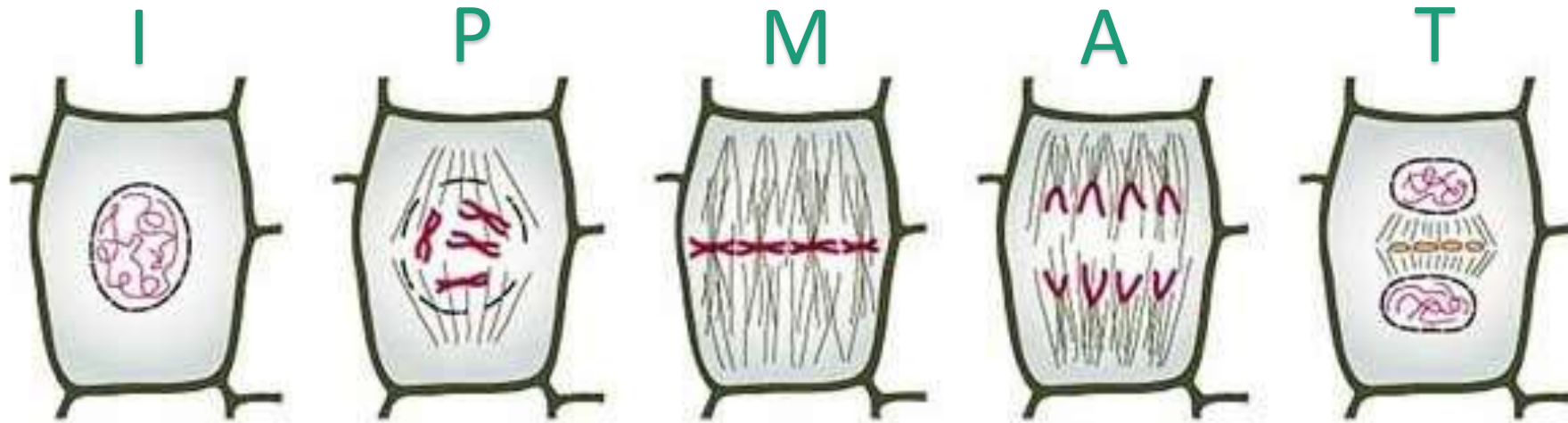
[Medical Institution- ✓ MITOSIS - MADE SUPER EASY](#)

What about cells with cell walls?

- Plants, algae, fungi have cell walls
- Cell plate forms between new cells
- After cell split, cell wall forms between membranes



Plant Cell Mitosis



One more time...

