Class Notes *Cell Growth and Division Part 2* **Questions/Main Idea:**	Name: _____ Period:_____ Date: _____ **Notes:**
(Review…) **Interphase**	• Nucleus is still intact and the nucleolus is visible. • DNA is in chromatin form • Includes G_1, S, and G_2
Mitosis step 1: Prophase	• Centrioles separate and produce spindle fibers • Chromatin condenses to form chromosomes • Nuclear envelope and nucleolus break down prophase → pro (#1!)
Chromatin? Chromosomes?	**Chromatin** = DNA unwound (looks like spaghetti) **Chromosome** = DNA condensed and organized **Sister chromatids** = a duplicated chromosome **Centromere** = the place where chromotids are connected To recap… During prophase, **chromatin** condense into **chromosomes**… which duplicate into **sister chromatids,** attached to each other at their **centromeres.**
Mitosis step 2: **Metaphase**	• Chromosomes line up at the middle of the cell • A spindle fibers attaches to each sister chromatid at the centromere metaphase → middle
Mitosis step 3: **Anaphase**	• Spindle fibers contract and pull apart the chromosomes to opposite ends of the cell anaphase → apart
Mitosis step 4: **Telophase**	• Chromosomes return to chromatin form • Nuclear membranes and nucleolus reform • Spindle fibers disappear • Nuclear division is complete telophase → telephone
After mitosis…Stage 3: **Cytokinesis**	• Pinching of the cytoplasm, resulting in two identical daughter cells.
Mitosis in plants	• Plants don't have centrioles • Cell plate forms during telophase • During cytokinesis, cell plate separates the daughter cells and becomes the new cell wall
Summary:	