Meiosis: a modified type of cell division in sexually reproducing organisms consisting of two rounds of cell division but only one round of DNA replication. It results in cells with half the number of chromosome sets

## 9.2 The mitotic phase alternates with interphase in the cell cycle

## Phases of the Cell Cycle

1. Interphase:

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- 1)  $G_1$  phase (Gap 1): cell grows and cytoplasmic organelles are replicated
- 2) S phase (Synthesis): DNA is replicated
- 3) **G<sub>2</sub> phase (Gap 2):** Cells checks itself to make to nothing is wrong (like misreplicated or lack of organelles) 2 centrosomes have formed
- 2. Mitosis: PPMAT (Preparing to Painting My Ass Turquoise)
  - 1) **Prophase:** Chromatin condenses into chromosomes nucleolus disappears mitotic spindles being to form the centrosomes move away from each other to opposite sides of the cell
  - 2) **Pro-metaphase:** Nuclear membrane breaks down Kinetochore microtubules invade nuclear space and attach to kinetochores Polar microtubule, such against each other moving centrosomes apart nuclear envelope fragments.
  - 3) Metaphase: centrosomes are now at opposite end of the en-chromosomes line up along the metaphase plate (imaginary out ) cleavage furrows
  - up along the metaphase plate (imaging verato) cleavage furrows

    4) Anaphase: Chromosomer block of the formeres sister chromatids move to opposite ends of the cell the cell elongates as the non-kinetochore microtubules lengthen.

identical genetic information

Telly hase: Mitotic spincles disappear/ depolymerized - 2 daughter nuclei form in the cell - cell article to a two - Cell membrane reforms - Myosin II and actin filament ring contract to cell into two. 
sister chromatids centromere spindle fibers appear spindle fibers attach to chromosomes condense chromosomes condense chromosomes condense chromosomes condense chromosomes dign chromosomes dign chromosomes division of cell at the end of mitosis. -

loosely coiled replicated chromosomes

chromosomes condense

chromosomes divide

sister chromatids move to opposite poles

nuclear membrane reforms chromosomes decondense

TELOPHASE

Spindle fibers attach to chromosomes

chromosomes condense

spindle fibers divide

sister chromatids move to opposite poles

nuclear membrane reforms chromosomes decondense

spindle fibers disappear

cytoplasm divides

parent cell becomes
2 daughter cells with

at the end of mitosis. – cytoplasm divides - cytoplasm divides - Myosin: a fibrous protein that forms the contractile filaments of muscle cells and is also involved in motion in other types of cells