

Mitosis

SBI 3U

# Mitosis and Meiosis

- **Mitosis:**

- division of **somatic** (body) cells

- **Meiosis**

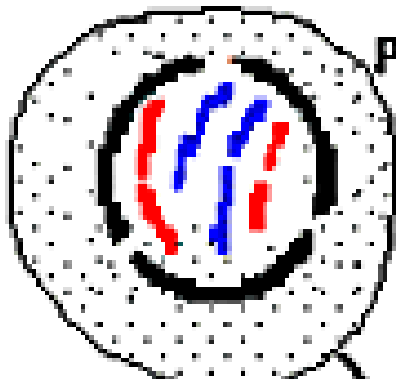
- division of gametes (sex cells)

# Mitosis

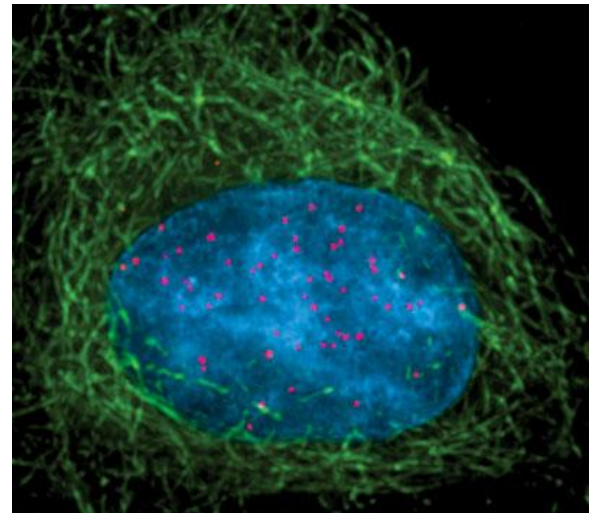
- Interphase
- Prophase
- Metaphase
- Anaphase
- Telophase

# Interphase

- **Interesting** things happen!
  1. Cell preparing to divide
  2. Genetic material doubles

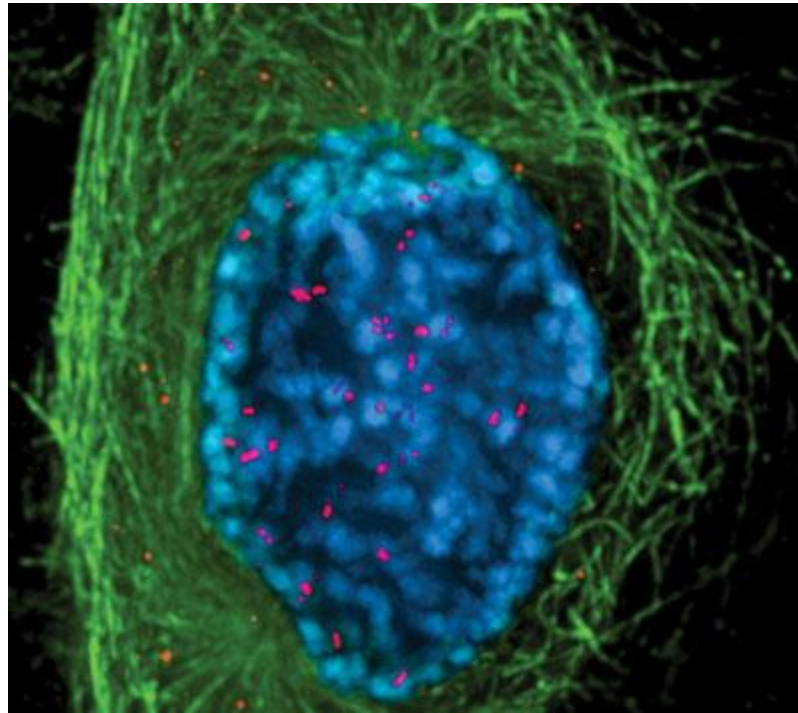


Parent cell

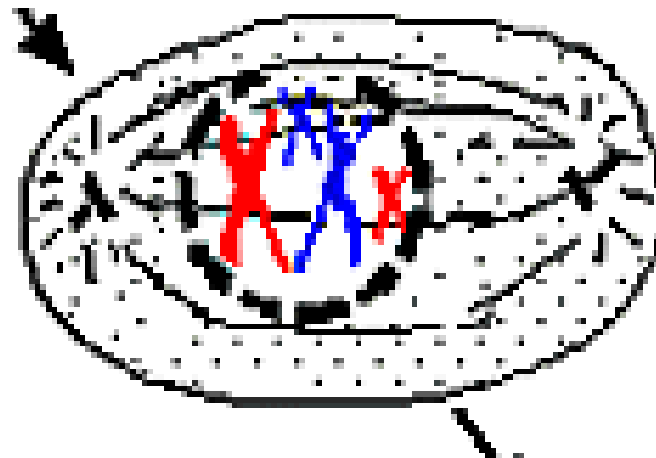


# Prophase

- Chromosome **pair up!**
  1. Chromosomes thicken and shorten
    - become visible
    - 2 **chromatids** joined by a **centromere**
  2. **Centrioles** move to the opposite sides of the nucleus
  3. **Nucleolus** disappears
  4. Nuclear membrane disintegrate

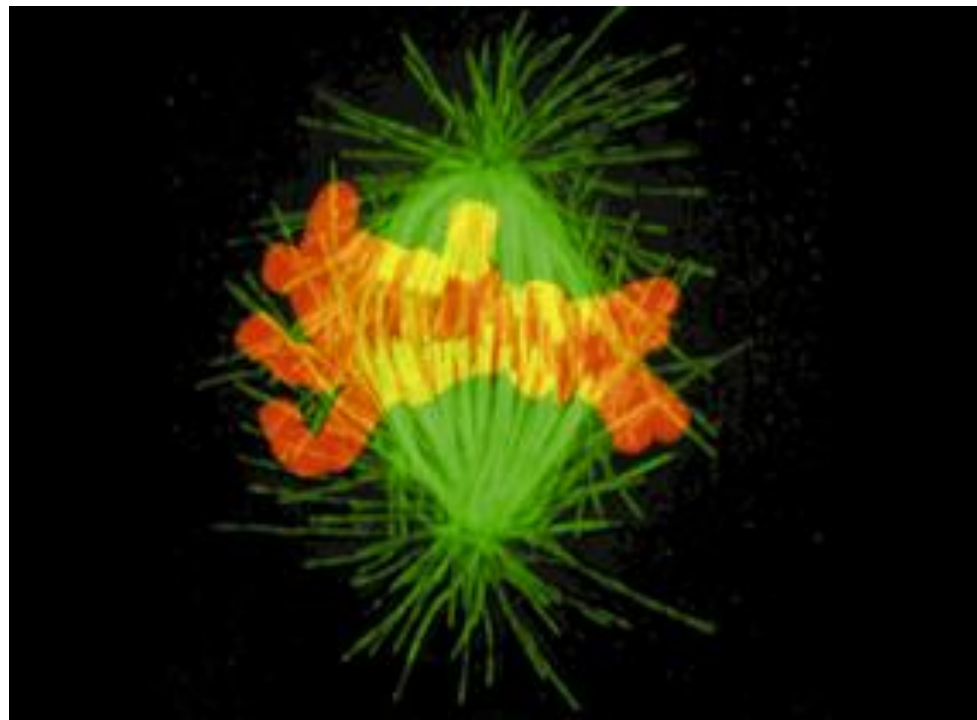


**Prophase**

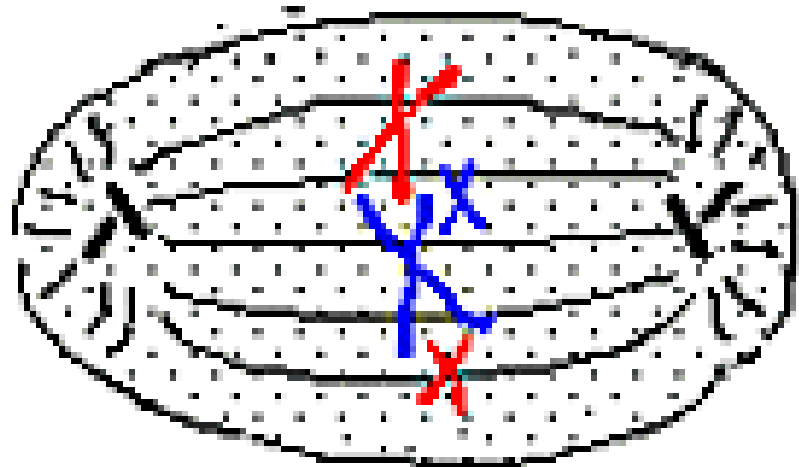


# Metaphase

- Chromosomes **meet in the middle!**
  1. Chromosomes arrange at **equator** of cell
  2. Become attached to **spindle fibres** by **centromeres**
  3. **Homologous** chromosomes **do not** associate



**Metaphase**

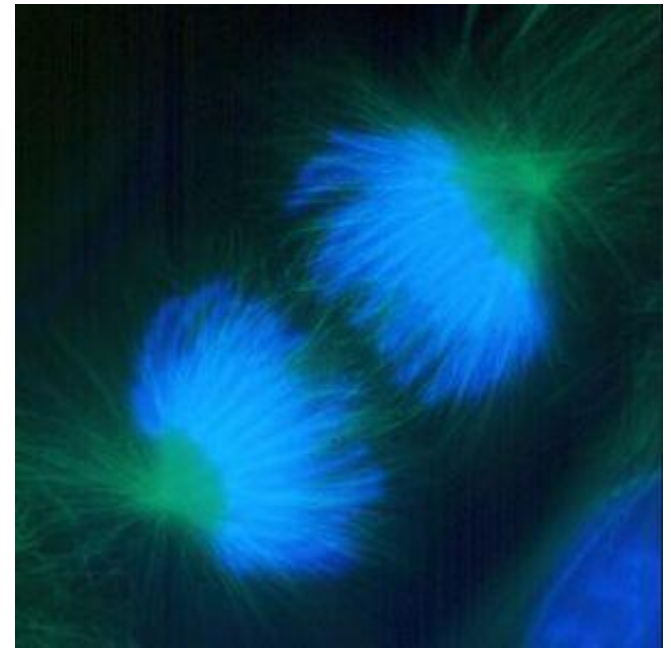
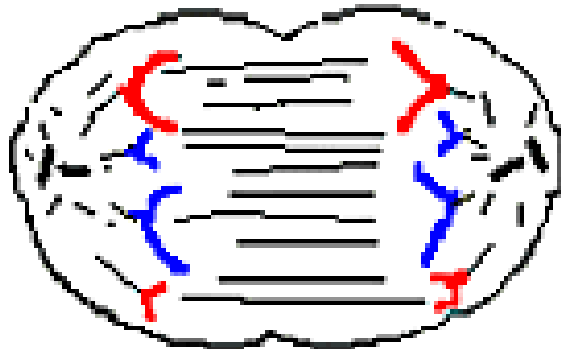




# Anaphase

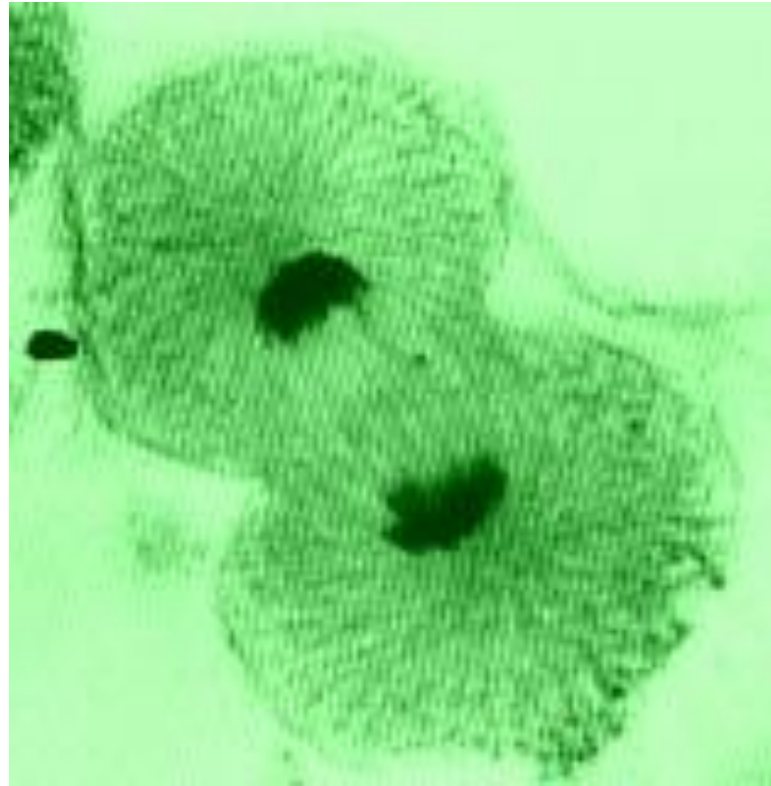
- Chromosomes get pulled **apart**
  1. Spindle fibres contract pulling chromatids to the opposite poles of the cell

**Anaphase**

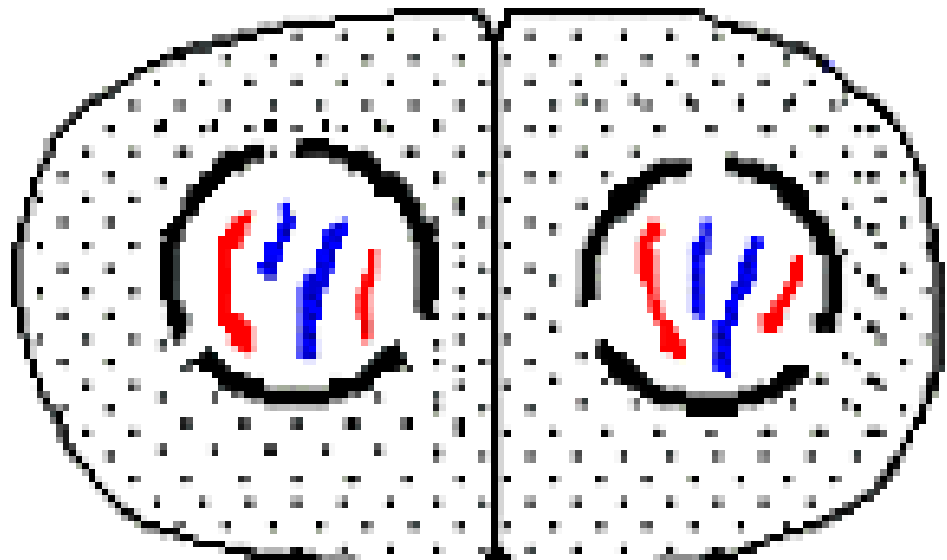


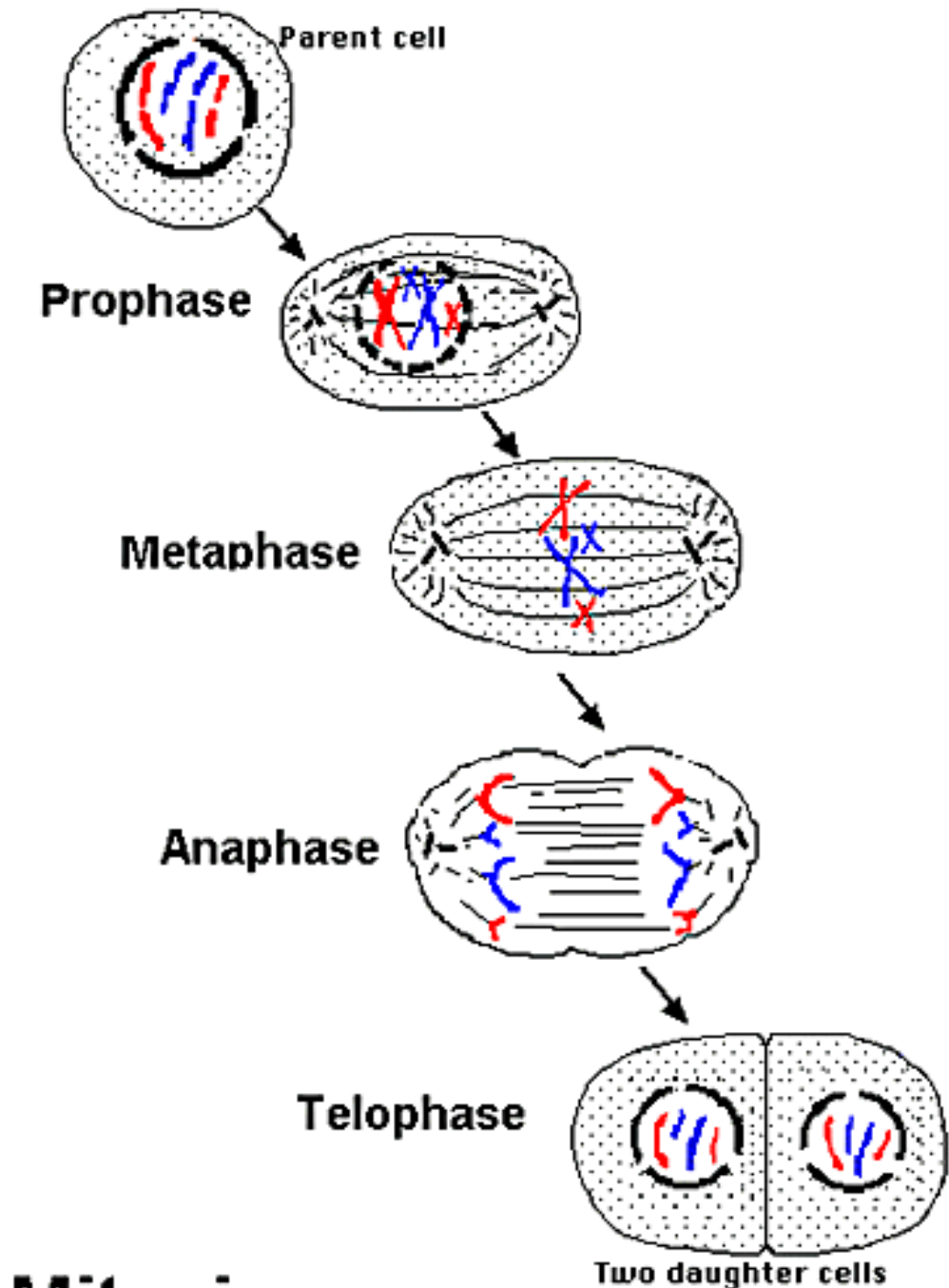
# Telophase

- Now there are **two!**
  1. Chromosomes uncoil
  2. Spindle fibres disintegrate
  3. Centrioles replicate
  4. Nuclear membrane forms
  5. Cell divides



**Telophase**





# Mitosis

