

Cell Cycle

Vocabulary

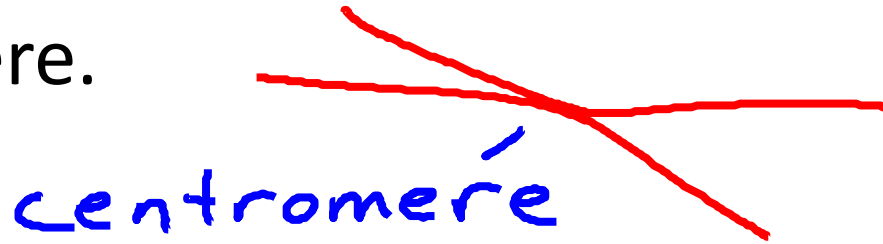
1. Chromosome

- Long strand of DNA that carries genetic information



2. Sister chromatids

- Identical strands of chromosomes attached at the centromere.



3. Centromere

- Point on sister chromatids where chromatids and spindle fibers attach.

4. Spindle fibers

- Strands of microtubules that move chromatids around.

5. Replication

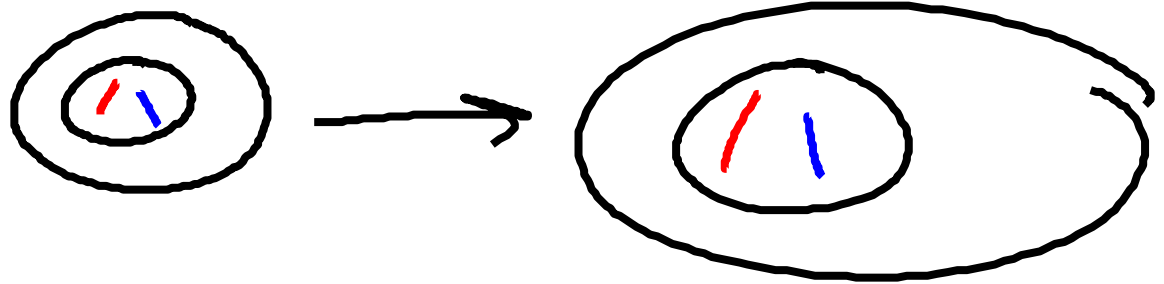
- The copying of a chromosome in S that results in sister chromatids

6. Interphase

- Part of cell cycle when a cell grows, does its job, and prepares for division. Has 3 stages

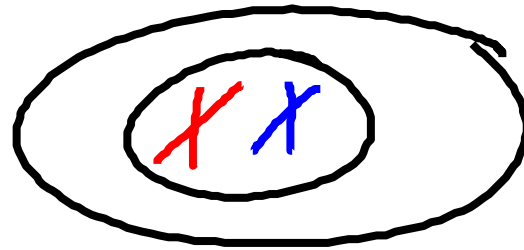
7. G1 phase

- First stage in Interphase when cell grows to mature size



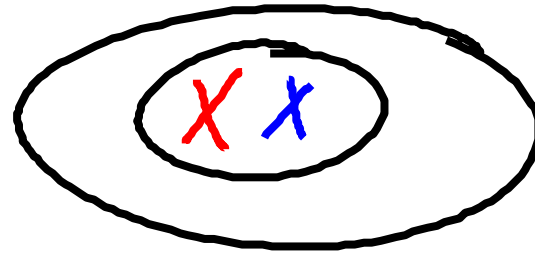
8. S phase

- Second stage of interphase when chromosomes are replicated, resulting in sister chromatids



9. G2 phase

- Third stage of Interphase when other stuff needed by the dividing cell is made.

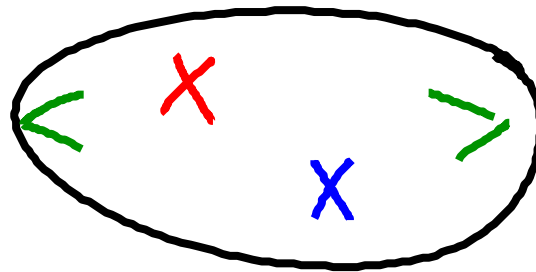


10. Mitosis

- The part of the cell cycle during which the nucleus divides. Has 4 stages.

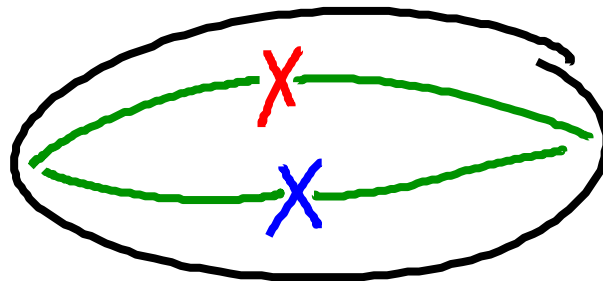
11. Prophase

- The 1st stage of mitosis, when:
 - The nuclear envelope disappears
 - The sister chromatids condense
 - Spindle fibers form



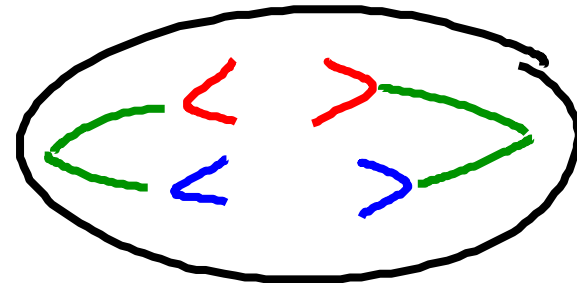
12. Metaphase

- The 2nd stage of mitosis when spindle fibers move chromatids to the equator (middle)



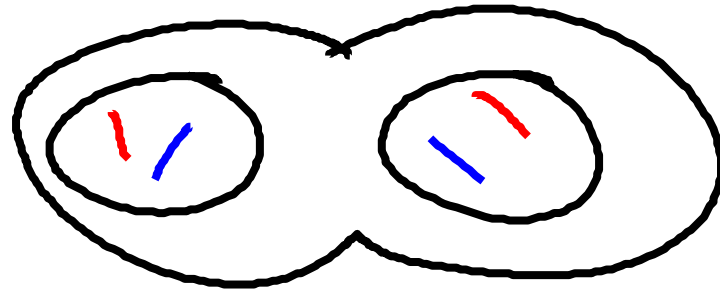
13. Anaphase

- The 3rd stage of mitosis when the spindle fibers pull the sister chromatids apart to opposite poles (ends).



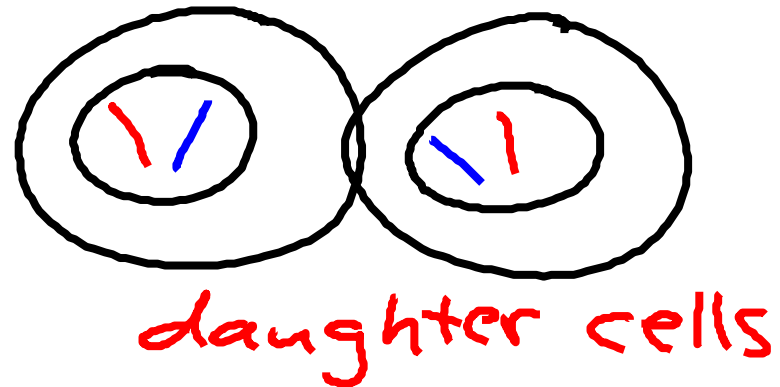
14. Telophase

- The 4th stage of mitosis when:
 - New nuclear envelopes develop
 - Cytokinesis begins



15. Cytokinesis

- Cell membrane pinches in, dividing the cytoplasm into two new “daughter cells”



16. Daughter cells

- The two new identical cells resulting from one round of the cell cycle.

17. Malignant tumor

- A tumor with cells that migrate through the body starting new tumors.

18. Benign tumor

- A tumor with cells that stay together in place.

19. Cancer

- The result of the spread of malignant cells.