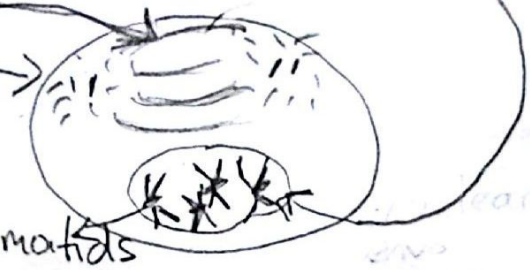
The Cell Cycle

① Interphase

The cell grows to its mature size, makes a copy of its DNA, and prepares to divide into two cells. Centrioles are also copied.

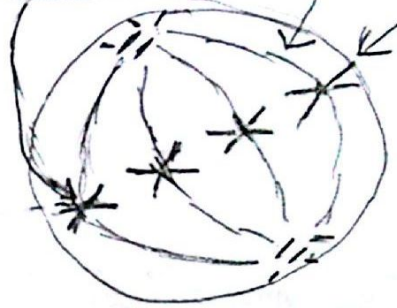
2a Mitosis: Prophase

Chromatin in the nucleus condenses to form chromosomes. The centrioles move to opposite sides of the nucleus. Spindle fibers form a bridge b/w the ends of the cell. The nuclear envelope breaks down.



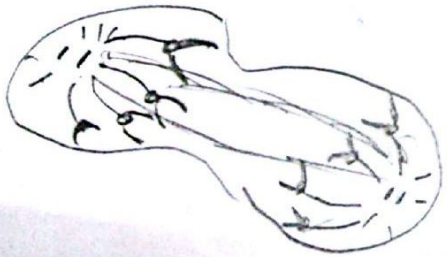
2b Mitosis: Metaphase

The chromosomes line up across the center of the cell. Each chromosome attaches to a spindle fiber at its centromere.



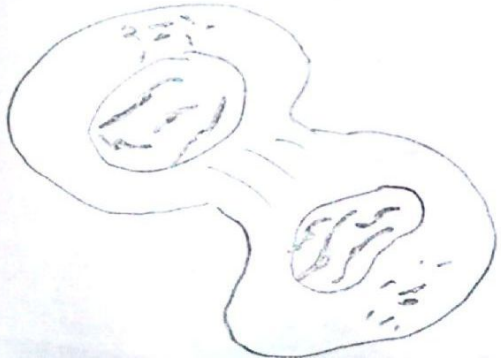
2c Mitosis: Anaphase

The centromeres split. The two chromatids separate, and each chromatid becomes a new chomosome. The new chromosomes move to opposite ends of the cell. The cell stretches out.



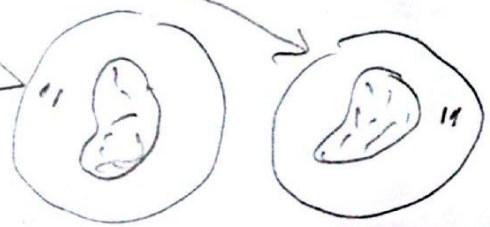
2d Mitosis: Telophase

The chromosomes begin to stretch out and lose the rodlike appearance. A new nuclear envelope forms around each region of chromosomes.



③ Cytokinesis

The cell membrane pinches in around the cell. The cell splits in two. Each daughter cell ends up with identical chromosomes and half the organelles.



Objective: Process of mitosis

↳ Cell theory: All cells come from other cells.

Mitosis: The <u>process</u> which one copy of the DNA is distributed into each of the two daughter cells.

Chromosomes: A double rod of condensed chromatin.