

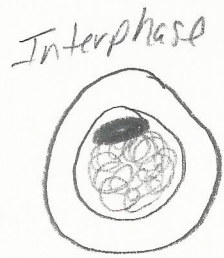
Interphase - Preparation for Division: G₁, S, G₂

Mitosis (M phase) - Cell Division: PMATC

G₁ - Grow, DNA is spread out as chromatin.

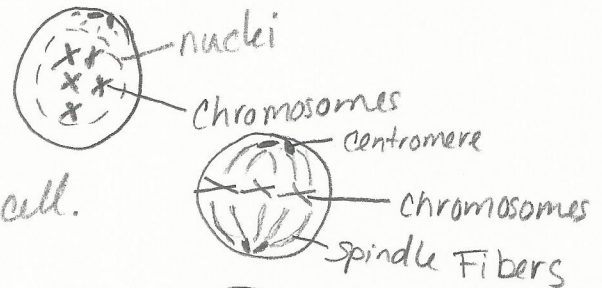
S (synthesis) - DNA is made/copied, and chromosomal proteins to make

G₂ - Grow, makes organelles, and nucleus prepares for cell division

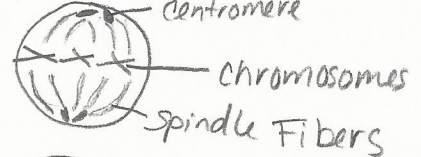


Mitosis - Cell Division

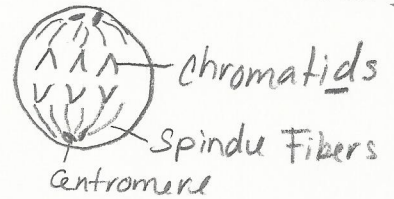
Prophase - Will see chromosomes in first dividing phase
1st dividing phase



Metaphase - Chromosomes line up in the middle of cell.
Middle



Anaphase - Chromatids are pulled apart by spindle fibers.
Apart



Telophase - Will see two nuclei and a cleavage furrow to show division.
Two nuclei



Cytokinesis - Two IDENTICAL nuclei cells have been separated from their cytoplasm.
cytoplasm splits in two



Cyclins - Make sure process is working properly.
(each) protein that connects to an enzyme called (CDK).

Tumors: 2 Types: Malignant Tumors and Benign Tumors

Malignant: Cancer cell, Different shape, mutated DNA, Damaged

Benign: Not cancer, Barrier around cells, same shape + size as normal cells.

Environmental factors causing cancer, chemical factor.

Stem cells: special cells that can become specialized cells that help repair and maintain damaged cells. (Ex: muscle, tissue, skin, nerve, and blood)

2 Types: Adult stem cell, Embryonic stem cell.

Apoptosis - Programmed Cell Death. (cells shrink and shrivel)

Carcinogens - Are things that can cause cancer. (Ex: chemicals or environmental factors)