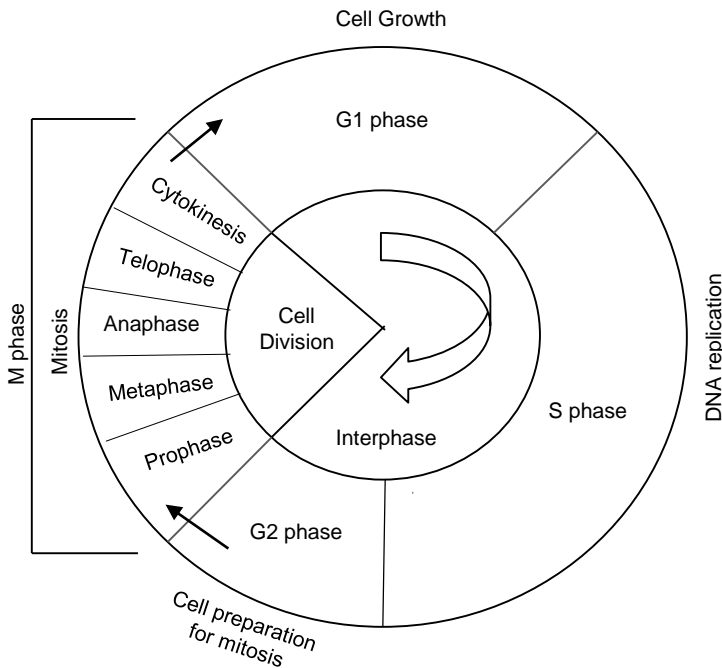


THE CELL CYCLE & MITOSIS



The Cell Cycle is _____

During the Cell Cycle, a cell _____

Interphase is _____

Interphase is divided into three phases: _____, _____, & _____

G₁ Phase

The G₁ phase is a period of activity in which cells _____
 _____ Cells will _____ and
 synthesize new _____

S Phase

The S phase replicates _____ and
 synthesizes _____ molecules.
 When DNA replication is completed, _____

G₂ Phase

During the G₂ phase, many of the organelles and molecules required for _____
 When G₂ is completed, the cell is ready to enter the _____

Mitosis are divided into four phases: _____, _____, _____, & _____

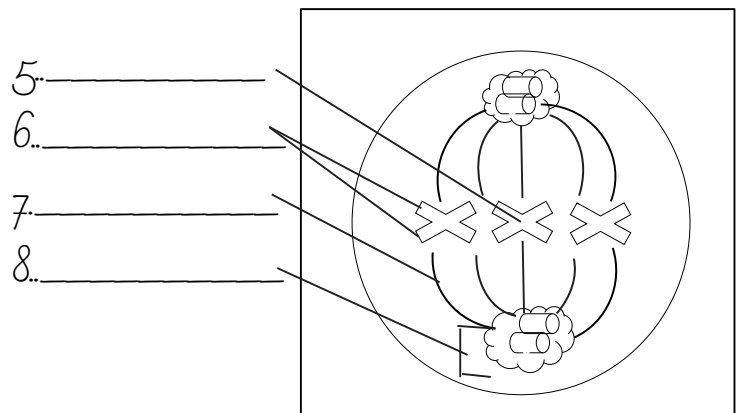
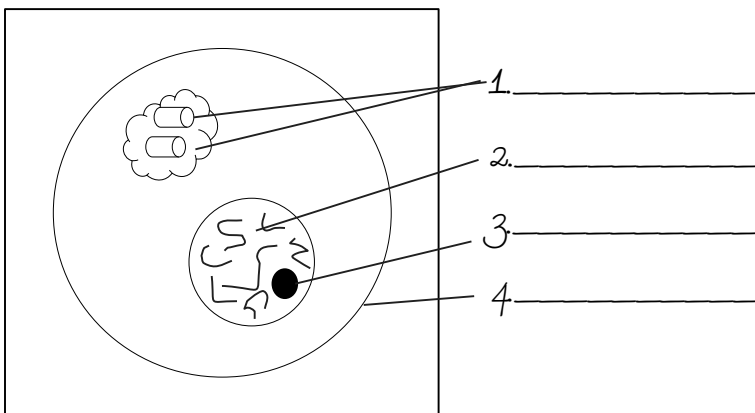
Below are cells in two different phases of the cell cycle, fill in the blanks using the word bank:

Chromatin
Nucleolus

Nuclear Envelope
Spinder Fiber

Chromosome
Centrosome

Sister Chromatids
Centrioles



THE CELL CYCLE & MITOSIS

MICROSCOPE LAB: INTERPHASE, MITOSIS, & CYTOKINESIS

Directions: Look under the microscope slides and draw what you see

Interphase

Interphase is divided into three phases:

_____ &

Interphase is the in between stages of cell division.

Prophase

- _____

- _____

Metaphase

- _____

- _____

Anaphase

- _____

Telophase

- _____

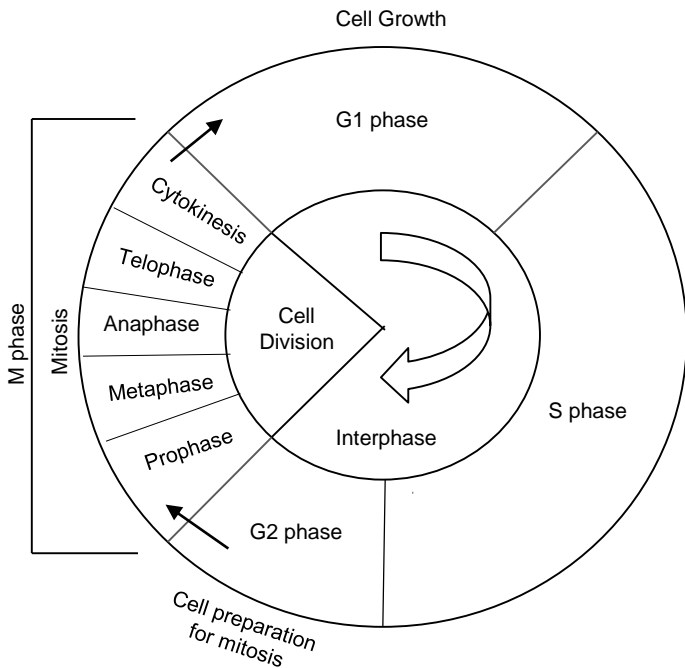
- _____

Cytokinesis

- _____

- _____

THE CELL CYCLE & MITOSIS



The Cell Cycle is

the series of events that cells go through as they grow and divide.

During the Cell Cycle, a cell

grows, prepares for division, and divides to form two daughter cells, each of which begins the cycle again.

Interphase is

the period of growth that occurs between cell dividison

Interphase is divided into three phases: G1, S, & G2

G₁ Phase

The G₁ phase is a period of activity in which cells do most of their growing. Cells will increase in size and synthesize new proteins and organelles.

S Phase

The S phase replicates chromosomes and synthesizes DNA molecules. When DNA replication is completed, the cell enters the G2 phase.

G₂ Phase

During the G₂ phase, many of the organelles and molecules required for cell division are produced. When G₂ is completed, the cell is ready to enter the cell is ready to enter the M phase.

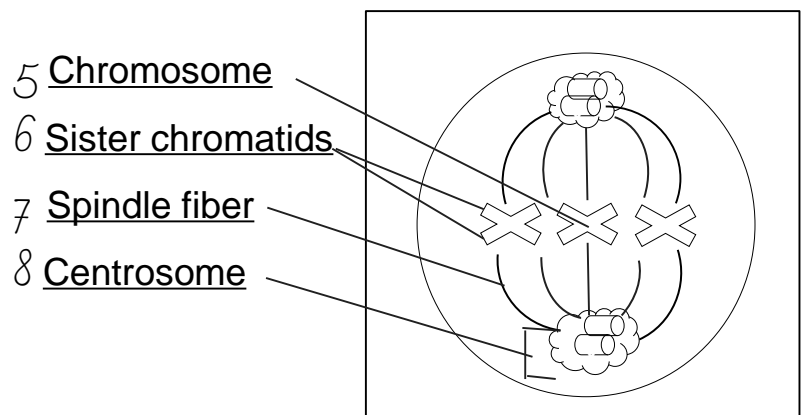
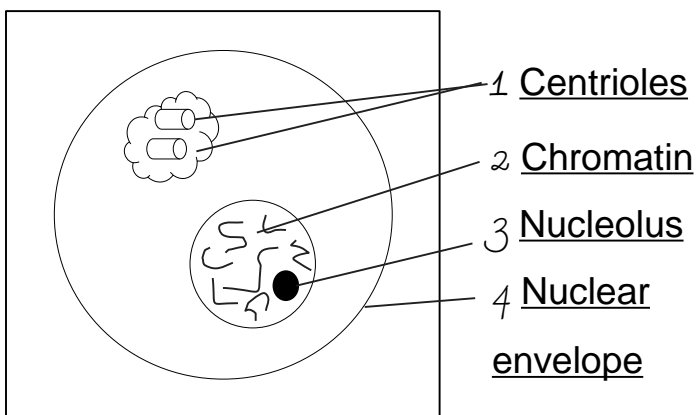
Mitosis are divided into four phases: prophase, metaphase, anaphase, & telophase
Below are cells in two different phases of the cell cycle, fill in the blanks using the word bank:

Chromatin
Nucleolus

Nuclear Envelope
Spinder Fiber

Chromosome
Centrosome

Sister Chromatids
Centrioles



THE CELL CYCLE & MITOSIS

MICROSCOPE LAB: INTERPHASE, MITOSIS, & CYTOKINESIS

Directions: Look under the microscope slides and draw what you see

Interphase

Interphase is divided into three phases: G1, S, & G2
Interphase is the in between stages of cell division.

Prophase

- Chromatin condenses into chromosomes
- Centrioles separate
- A spindle forms
- The nuclear envelope breaks down

Metaphase

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

Anaphase

- The sister chromatids separate into individual chromosomes and are moved apart.

Telophase

- The chromosomes gather at opposite ends of the cell & lose their distinct shapes.
- Two new nuclear envelopes will form.

Cytokinesis

- The cytoplasm pinches in half.
- Each daughter cell has an identical set of duplicate chromosomes.