

Name: _____

Date: _____

Notes: The Cell Cycle

What are all living cells made from? _____

What must happen in order for a cell to **grow**? _____

How are all the cells in an organism alike? _____

What is the purpose of **interphase**? _____

What percentage of their lives do cells spend in interphase? _____

What kind of stages are **G₁** and **G₂**? _____

What happens during **gap stages**? _____

What do we call the **G₀** phase? _____

How are cells in the G₀ stage different from cells in the G₁ and G₂ stages?

What does the **S** in the **S stage** stand for? _____

What happens during the S stage? _____

What does every cell in an organism need? _____

Define **replication**: _____

What happens to a strand of DNA before it can be replicated? _____

Which *enzymes* add nucleotides to copy the DNA? _____

What does it mean that DNA replication is a **semi-conservative** process?

What is the purpose of **mitosis**? _____

What is true of the two daughter cells because of mitosis? _____

If the parent cell has **46 chromosomes** before mitosis, how many chromosomes will be in each *genetically identical* daughter cell after mitosis? _____

Describe **cytokinesis**: _____

What is the purpose of the checkpoints that occur during the cell cycle?

What process does the cell undergo if serious mistakes occur? _____

What does the process of apoptosis cause? _____

What might cause cells to ignore checkpoints? _____

What would happen to a cell that was ignoring its checkpoints?

What do we call a group of cells that is uncontrollably dividing? _____

What disease is the result of **uncontrolled cell division**? _____

What do we call the process that occurs in **prokaryotes** that is similar to mitosis?

Interphase				Mitosis			Cytokinesis		
G ₁	✓POINT	S	G ₂	✓POINT	P	M		✓POINT	A

