**Review for Test: Chapter 8 Cellular Basis of Reproduction and Inheritance**

* Sexual vs. Asexual Reproduction
	+ Binary Fission
* Chromosome structure in prokaryotes vs. eukaryotes

Chromatids vs. Chromosomes

* Chromosome structure
	+ Chromatin
	+ Centromere
	+ Sister Chromatids
* Cell Cycle

Be able to recognize the stage of the cell cycle by a picture or diagram

Know the events that occur in each stage

* + Interphase (Centrosomes/Centrioles)
		- G1, G0, S, G2
	+ Mitotic Phase
		- Mitosis (Mitotic Spindles and Kinetochores)
			* Prophase, Metaphase, Anaphase, Telophase (Cleavage Furrow vs. Cell Plate)
		- Cytokinesis (Daughter Cells)
* Cell Division Controls
	+ Anchorage Dependence, Density-Dependent Inhibition, Essential Nutrients, and Growth Factors
* Cell Cycle Control System
	+ G1, G2, and M Checkpoints
* Cancer
* Tumor
	+ Benign vs. Malignant (Metastasis)
	+ Carcinoma’s and Leukemia
	+ Treatment (Surgery, Radiation, Chemotherapy)

Be able to Compare and Contrast Mitosis and Meiosis

* Somatic Cells vs. Gametes
* Autosomes vs. Sex Chromosomes
* Homologous Chromosomes (Locus)
* Diploid vs. Haploid
* Life Cycle, Fertilization, Zygote
* Meiosis
	+ Interphase
	+ Meiosis I: Prophase I, Metaphase I, Anaphase I, Telophase I
		- Synapsis, Crossing Over
	+ Meiosis II: Prophase II, Metaphase II, Anaphase II, Telophase II
	+ Cytokinesis
* Genetic Variation
	+ Independent Orientation, Random Fertilization, Crossing Over (Chiasma)
	+ Genetic Recombination
* Genetic Disorders
	+ Karyotype
	+ Non Disjunction
	+ Deletion, Inversion, Translocation, Duplication