**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