

6-1 Chromosomes

Name _____

Section Questions

Period _____ Date _____

- 1.) How many cells are produced by an adult human body every day? Every second?
- 2.) The type of cell division differs depending on what two things?
- 3.) What are the reproductive cells such as sperm and eggs called? _____
- 4.) Why is DNA the first thing to be copied and distributed when a cell divides?
- 5.) Explain the two stages of binary fission.
- 6.) What divides with binary fission and what is produced by it?
- 7.) The information encoded in DNA is organized into _____ which are segments of DNA that code for _____ or _____ molecules. A single molecule of DNA has _____ of genes. When genes are being used, the DNA is _____ so information can be used.
- 8.) Explain the coiling process of DNA to form chromosomes.
- 9.) What are chromatids and centromeres?
- 10.) What is a somatic cell? How many chromosomes are in a human somatic cell?
- 11.) What do you call the two similar chromosomes in a pair? _____
- 12.) How many sets of chromosomes does a human somatic cell have? Where do they come from?

- 13.) Explain the difference between a diploid and a haploid cell AND give an example of each.
- 14.) What does the fusion of two haploid cells (gametes) form?
- 15.) Different organisms have different numbers of chromosomes. For example, chimpanzees have _____ chromosomes, some ferns have more than _____ and Australian ants have only _____ pair.
- 16.) The human somatic cells have 22 pairs of _____ and one pair of _____.
- 17.) Explain the Y chromosome and its job in determining gender.
- 18.) In human males the sex chromosomes are _____ and in females they are _____.
- 19.) What genetic change or problem is present in people with Down syndrome?
- 20.) Why are babies with Down syndrome more likely if the mother is older?
- 21.) Explain nondisjunction.
- 22.) Explain a deletion mutation.
- 23.) Explain a duplication mutation.
- 24.) Explain an inversion mutation.
- 25.) Explain a translocation mutation.