

Chapter 2 – Basic Genetics

1. A triploid organism would have _____ copies of all genes.
 - a. 0
 - b. 1
 - c. 2
 - d. 3**
2. Homologous chromosomes contain the same genes for the same traits at the same loci.
 - a. True**
 - b. False
3. Which statement is false?
 - a. Individuals who are heterozygous for a defective gene are carriers of the defective allele.
 - b. Heterozygous individuals have the genetic disorder.**
 - c. Heterozygotes have two different alleles for the same trait.
 - d. All of the above are false.
4. A _____ allele determines the phenotype even when only one copy is present.
 - a. dominant**
 - b. recessive
 - c. codominant
 - d. homozygous
5. Sister chromatids occur following _____.
 - a. gamete fusion
 - b. cell division
 - c. transcription
 - d. replication**
6. Gametes are _____ and somatic cells are _____.
 - a. diploid; haploid
 - b. haploid; diploid**
 - c. haploid; haploid
 - d. diploid; diploid
7. In the following genetic cross, Pp x Pp, what percentage of the offspring will have a recessive phenotype?
 - a. 0%
 - b. 25%**
 - c. 50%
 - d. 75%
8. Sex-linked genes are found on _____.
 - a. the X chromosome only
 - b. the Y chromosome only
 - c. either the X or the Y chromosome**
 - d. the autosomes
9. Sex-linked genes only affect male carriers.
 - a. True
 - b. False**
10. Humans have _____ chromosomes in the gametes.
 - a. 2
 - b. 12
 - c. 24**
 - d. 48

Chapter 2 – Basic Genetics Answers

1.D 2.A 3.B 4.A 5.D 6.B 7.B 8.C 9.B 10.C