

**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**