Name: _____ Class: _____ Date: _____ ID: A

Honors Biology Ch 11 PRACTICE TEST

Multiple Choice

Identify the choice that best completes the statement or answers the question.

____ 1. The principles of probability can be used to
a. predict the traits of the offspring produced by genetic crosses.
b. determine the actual outcomes of genetic crosses.
c. predict the traits of the parents used in genetic crosses.
d. decide which organisms are best to use in genetic crosses.

____ 2. A Punnett square shows all of the following EXCEPT
a. all possible results of a genetic cross.
b. the genotypes of the offspring.
c. the alleles in the gametes of each parent.
d. the actual results of a genetic cross.

____ 3. How many different allele combinations would be found in the gametes produced by a pea plant whose genotype was RrYY?
a. 2
b. 4
c. 8
d. 16

____ 4. If an organism's diploid number is 12, its haploid number is
a. 12.
b. 6.
c. 24.
d. 3.

____ 5. What is shown in Figure 11-1?

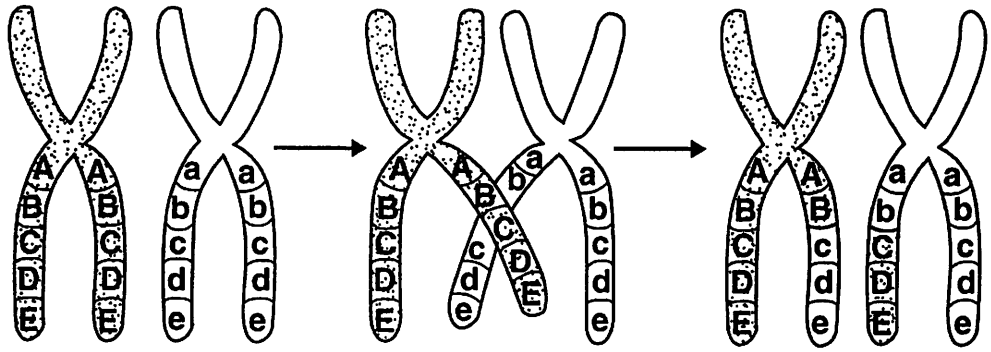

Figure 11–1

a. independent assortment
b. anaphase I of meiosis
c. crossing-over
d. incomplete dominance

____ 6. Chromosomes form tetrads during
a. prophase of meiosis I.
b. metaphase of meiosis I.
c. prophase of meiosis II.
d. metaphase of meiosis II.

____ 7. Unlike mitosis, meiosis results in the formation of
a. two genetically identical diploid cells.
b. four genetically different haploid cells.
c. four genetically identical haploid cells.
d. two genetically different diploid cells.

____ 8. The principle of dominance states that
a. all alleles are dominant.
b. all alleles are recessive.
c. some alleles are dominant and others are recessive.
d. alleles are neither dominant nor recessive.

____ 9. Two plants with the genotypes TT and Tt
a. would have the same phenotype.
b. would have different phenotypes.
c. have all dominant alleles.
d. have all recessive alleles.

____ 10. Organisms that have two identical alleles for a particular trait are said to be
a. hybrid.
b. homozygous.
c. heterozygous.
d. dominant.

____ 11. What principle states that during gamete formation genes for different traits separate without influencing each other's inheritance?
a. principle of dominance
b. principle of independent assortment
c. principle of probabilities
d. principle of segregation

____ 12. Situations in which one allele for a gene is not completely dominant over another allele for that gene are called
a. multiple alleles.
b. incomplete dominance.
c. codominant alleles.
d. multiple genes.

____ 13. The number of chromosomes in a gamete is represented by the symbol
a. 2N.
b. X.
c. N.
d. Y.

____ 14. Gametes are produced by the process of
a. mitosis.
b. meiosis.
c. crossing-over.
d. replication.

____ 15. Unlike mitosis, meiosis results in the formation of
a. diploid cells.
b. haploid cells.
c. 2N daughter cells.
d. body cells.

____ 16. Traits that are produced by the interaction of several genes are said to be
a. polygenic.
b. codominant.
c. haploid.
d. diploid.

Name: _____

Completion
Complete each statement.

17. A pea plant that has two different alleles for the same trait is said to be _____.

18. An organism's gametes have _____ the number of chromosomes found in the organism's body cells.

19. The process shown in Figure 11-1 may occur during the stage of meiosis called _____.

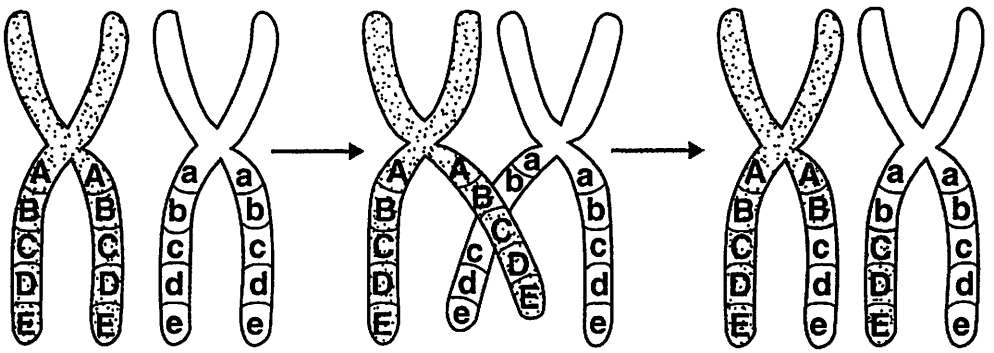

Figure 11-1

20. The different forms of a gene are called _____.

21. _____ is the likelihood that a particular event will occur.

22. In the Punnett square shown in Figure 11-6, the genotypes of the offspring are _____.

		T	*t*
TT	*T*	*TT*	*Tt*
	T	*TT*	*Tt*

T	=	*Tall*
t	=	*Short*

Figure 11-6

23. Meiosis produces four genetically different _____ cells.

Short Answer

24. How many recessive alleles for a trait must an organism inherit in order to show that trait?

25. What is the phenotype ratio of the offspring in the Punnett square shown in Figure 11-3?

RrYy	RY	Ry	rY	ry
RY	RRYY	RRYy	RrYY	RrYy
Ry	RRYy	RRyy	RrYy	Rryy
rY	RrYY	RrYy	rrYY	rrYy
ry	RrYy	Rryy	rrYy	rryy

Seed Shape
***R* = Round**
***r* = Wrinkled**

Seed Color
***Y* = Yellow**
***y* = Green**

Figure 11–3

26. Contrast the cells produced by mitosis with those produced by meiosis.

27. Define homologous chromosomes.

Essay

28. Explain the difference between incomplete dominance and codominance.

29. The stages of meiosis are classified into two divisions: meiosis I and meiosis II. Compare and contrast these two divisions.