# Glencoe Biology

## Chapter 10: Sexual Reproduction and Genetics

### Chapter Test Practice

1. The process by which haploid gametes combine is called ____.

- ○ **A)** interphase
- ○ **B)** fertilization
- ○ **C)** genetic variation
- ○ **D)** synapsis

2. Crossing over results in ____.

- ○ **A)** the removal of genotypes from a zygote
- ○ **B)** less genetic variation
- ○ **C)** fewer combinations of genes
- ○ **D)** greater genetic variation

3. Diploids contain twice the number of chromosomes found in a single ____.

- ○ **A)** gamete
- ○ **B)** zygote
- ○ **C)** protein molecule
- ○ **D)** synapse

4. Homologous chromosomes separate during which phase(s) of meiosis?

- ○ **A)** interphase
- ○ **B)** anaphase I
- ○ **C)** telophase I
- ○ **D)** interphase and telophase I

5. Meiosis produces ____ in gametes.

- ○ **A)** enzymes

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- B) identical daughter cells
- C) forty-six chromosomes
- D) genetic variation

6. Polyploidy is the occurrence of one or more extra sets of ____ in an organism.

Need a Hint?

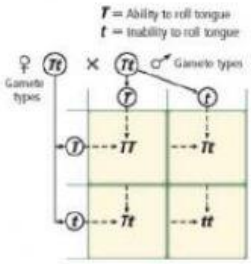
- A) chromosomes
- B) zygotes
- C) phenotypes
- D) diploids

7. The observable expression of an allele pair is called a ____.

Need a Hint?

- A) recessive gene
- B) genotype
- C) monohybrid cross
- D) phenotype

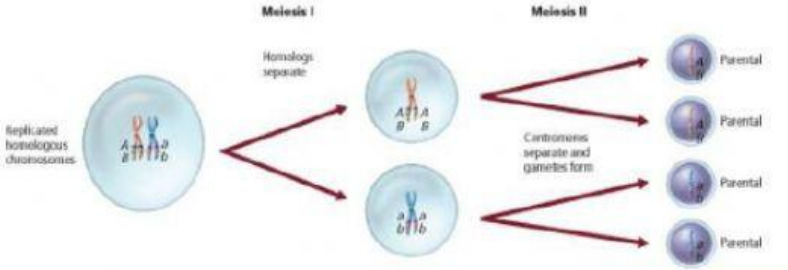
8. What does the TT represent in this Punnett square?




Need a Hint?

- A) a genotype consisting of two dominant alleles
- B) a heterozygous trait
- C) a single allele
- D) a genotype consisting of two recessive alleles

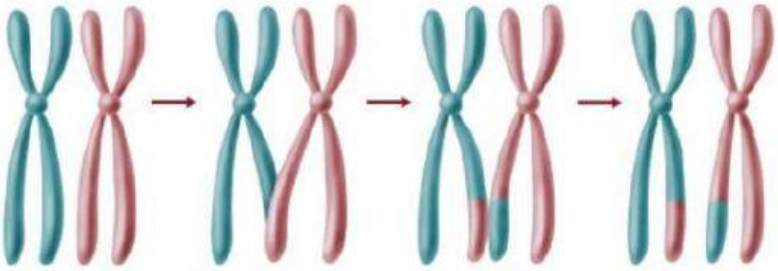
9. What does this figure represent?




Need a Hint?

- A) gene linkage during meiosis
- B) gene segregation during gamete formation
- C) gene segregation during meiosis
- D) formation of a single parent cell

10. What process does this figure show?



Need a Hint?

- A) protein synthesis
- B) replication of DNA
- C) chromosomal segment exchange
- D) mitosis

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11. What technique did Mendel use to better understand inherited traits?

- A) removed dominant alleles
- B) cross pollinated same-sex plants
- C) allowed plants to self-fertilize
- D) cross pollinated male and females

12. Which of these applies to genetic recombination?

- A) no formula can calculate gene combinations
- B) genes are prevented from combining
- C) gene combinations are produced by crossing over
- D) involves glucose production

13. Which of these pertains to Mendel's law of independent assortment?

- A) observable characteristics of a trait
- B) separation of alleles during meiosis
- C) random distribution of alleles
- D) protein production

14. Which statement is not true of genes located close together on the same chromosome?

- A) They travel together during gamete formation.
- B) They always segregate independently.
- C) They are linked together.
- D) They do not segregate independently.

15. Which statement pertains to Mendel's law of segregation?

- A) Homozygous organisms are called hybrids.
- B) Two alleles for each trait separate during meiosis.
- C) Allele pairs are called a genotype.
- D) Dominant traits are visible.

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