

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

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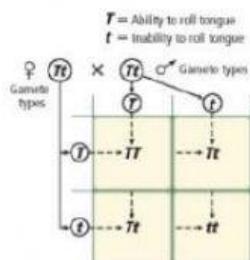
- A) chromosomes
- B) zygotes
- C) phenotypes
- D) diploids

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

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

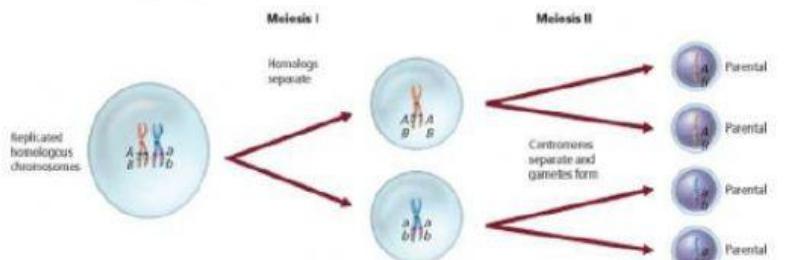
8. What does the TT represent in this Punnett square?



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

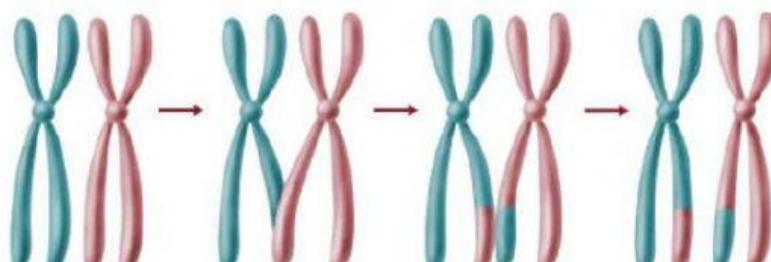
9. What does this figure represent?



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- 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?



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- 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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