

1. A dominant gene _____.

- (A) is more prevalent in the population than its recessive counterpart
- (B) prevails because the gene product from both genes is needed to manifest the recessive trait**
- (C) enhances the cell in some important way
- (D) dominates by preventing the recessive gene from making its mRNA

2. Regarding mutations of the sex chromosomes, _____.

- (A) mutations on the lower part of the X chromosome can be recessive
- (B) they produce wild-type traits
- (C) mutations on the upper part of the X chromosome are more often than not dominant
- (D) they can be dominant or recessive on the Y chromosome**

3. A Barr body _____.

- (A) is an inactivated X chromosome**
- (B) is the inactivated missing portion of the Y chromosome
- (C) is inactivated during the prophase of mitosis
- (D) is an inactive polar body

4. The multicolored fur in Calico cats _____.

- (A) is primarily seen in female Calico cats**
- (B) is due to a reactivated Barr body
- (C) stems from a trisomy karyotype
- (D) would not occur if fur color were located on the X chromosome

5. Which of the following statements is not true? A genetic mutation _____.

- (A) changes that gene's mRNA
- (B) may or may not change the protein made by that gene
- (C) changes the tRNA building the protein for that gene**
- (D) may or may not change the function of the protein made by that gene

6. How many boxes does a Punnett square need to analyze two genes?

- (A) 4
- (B) 9
- (C) 16**
- (D) 25

7. How many boxes does a Punnett square need to analyze a hemophiliac family?

- (A) 4**
- (B) 9
- (C) 16
- (D) 25

8. In the AB blood type, A and B genes are _____.

- (A) recessive
- (B) dominant
- (C) codominant**
- (D) carbohydrate molecules attached to hemoglobin

9. People with type A blood _____.

- (A) have anti-A antibodies
- (B) have anti-B antibodies**
- (C) have anti O antibodies
- (D) have both anti-B and anti-O antibodies

10. The DNA within mitochondria _____.

- (A) is single stranded
- (B) is from the father alone
- (C) is from the mother alone**
- (D) is from the mother and father together