

Genetics Quiz

Score: _____

1. In the genotype the capital letter stands for the _____ allele.

- ☐ (A) heterozygous
- ☐ (B) dominant
- ☐ (C) recessive
- ☐ (D) homozygous

2. In humans, straight toes (S) is dominant over curled toes (s). What genotypes would form from a cross between a recessive male and a heterozygous female?

- ☐ (A) SS, Ss, Ss, ss
- ☐ (B) Ss, Ss, ss, ss
- ☐ (C) Ss, Ss, Ss, Ss
- ☐ (D) Ss, Ss

3. In wildcats, gray fur is dominant (G) and purple fur is recessive (g). if a heterozygous male wildcat and a homozygous recessive female wildcat reproduce, what are the possible genotypes of the offspring? (Hint: make a Punnett Square to figure this out)

- ☐ (A) Gg & gg
- ☐ (B) GG & gg
- ☐ (C) GG
- ☐ (D) Gg & Gg
- ☐ (E) gg

4. Lower case letters refers to what kind of traits?

- ☐ (A) recessive
- ☐ (B) dominant

5. In garden peas, round seed coats (R) are dominant over wrinkled seed coats (r). In a cross between a homozygous male and a heterozygous female, what are the possible genotypes of the offspring?

- ☐ (A) RR, rr
- ☐ (B) Rr, Rr
- ☐ (C) Rr, rr
- ☐ (D) RR, Rr

6. In a cross between a homozygous round pea plant (RR) and a homozygous wrinkled pea plant (rr), what percentage of pea plants will come out round?

- ☐ A 25%
- ☐ B 50%
- ☐ C 75%
- ☐ D 100%

7. Hybrid is to heterozygous as _____ is to homozygous.

- ☐ A purebred
- ☐ B recessive
- ☐ C dominant

8. Which of the following represents a homozygous recessive genotype?

- ☐ A TTTT
- ☐ B tt
- ☐ C TT
- ☐ D Tt

9. The physical appearance of an organism, such as color, height, hair type, or skin color is

- ☐ A phenotype.
- ☐ B homozygous.
- ☐ C genotype.
- ☐ D heterozygous.

10. An example of a heterozygous pairing is

- ☐ A PPPP
- ☐ B PP
- ☐ C Pp
- ☐ D pp

11. Robert Hooke is to cells as _____ is to genetics.

- ☐ A Robert Hooke
- ☐ B Robert Schwann
- ☐ C Gregor Mendel
- ☐ D George Mendez

12. If both white flowers (W) and red flowers (R) are dominant, what are the possible phenotypes that could arise in the offspring?

- ☐ A Red flowers with White stripes
- ☐ B Pink flowers

- ☐ C Either red flowers or white flowers
- ☐ D both a and b

13. If a mother and a father both have type AB blood (IAIB), what are the odds that their children will also have type AB blood?

- ☐ A 25%
- ☐ B 50%
- ☐ C 75%
- ☐ D 100%

14. Katie passes a local dairy farm that has many brown cows, but only a few white cows. A dominant allele produces brown hair in cows, and a recessive allele produces white hair. What characteristic of any brown cow can Katie identify?

- ☐ A the phenotype of the cow's hair color
- ☐ B the genotype of the cow's hair color
- ☐ C the phenotype of both of the cow's parents
- ☐ D the genotype of both of the cow's parents

15. In sponges, squarepants (S) are dominant to roundpants (s), and long noses (L) are dominant to stubby noses (l). What would be the dihybrid genotype of Spongebob Squarepants if he was a purebred squarepants with a stubby nose?

- ☐ A SsLl
- ☐ B SSLL
- ☐ C ssLl
- ☐ D SSLl
- ☐ E SSll