

Dihybrids

Name _____

For each exercise, (a) show the parental genotypes, (b) draw out the Punnett Square, and (c) answer the question, in the spaces provided.

In mice, the ability to run normally is a dominant trait. Mice with this trait are called running mice (R). The recessive trait causes mice to run in circles only. Mice with this trait are called waltzing mice (r). Hair color is also inherited in mice. Black hair (B) is dominant over brown hair (b).

1. Cross a heterozygous running heterozygous black mouse with a homozygous running, homozygous black mouse. What is the probable phenotype ratio?

a. _____ b. _____ c. _____

2. Cross a homozygous running, homozygous black mouse with a heterozygous running, brown mouse. What is the probable phenotype ratio?

a. _____ b. _____ c. _____

3. Cross a waltzing brown mouse with a waltzing brown mouse. What is the probable phenotype?

a. _____ b. _____ c. _____

4. Cross a homozygous running, heterozygous black mouse with a waltzing brown mouse. What is the probable phenotype ratio?

a. _____ b. _____ c. _____

5. Cross a heterozygous running, brown mouse with a heterozygous running, homozygous black mouse. What is the probable phenotype ratio?

a. _____ b.

c. _____

6. Cross a heterozygous running, heterozygous black mouse with a heterozygous running, heterozygous black mouse. What is the probable phenotype ratio?

a. _____ b.

c. _____