

Punnett Squares

Crosses Involving One Trait

In a certain species of animal, black fur (B) is dominant over brown fur (b). Using the following Punnett square, predict the genotypes and phenotypes of the offspring whose parents are both Bb or have heterozygous black fur.

	B	b
B		
B		

Genotypes:

_____ % homozygous black fur (BB)

_____ % heterozygous black fur (Bb)

_____ % homozygous brown fur (bb)

Phenotypes:

_____ % black fur

_____ % brown fur

Now do the same when one parent is homozygous black and the other is homozygous brown.

Genotypes:

_____ % homozygous black fur (BB)

_____ % heterozygous black fur (Bb)

_____ % homozygous brown fur (bb)

Phenotypes:

_____ % black fur

_____ % brown fur

Repeat this process again when one parent is heterozygous black and the other is homozygous brown.

Genotypes:

_____ % homozygous black fur (BB)

_____ % heterozygous black fur (Bb)

_____ % homozygous brown fur (bb)

Phenotypes:

_____ % black fur

_____ % brown fur