

Punnett Squares Practice

1. Examine the following Punnett squares and circle those that are correct.

	D	d
d	Dd	dd
d	Dd	dd

	D	D
d	Dd	DD
d	Dd	DD

	A	a
A	AA	aa
a	Aa	Aa

	A	a
a	Aa	aa
a	Aa	aa

- What do the letters on the outside of the Punnett square stand for?
- What do the letters on the inside of the Punnett square stand for?
- In corn plants, normal height, *N*, is dominant to short height, *n*. Complete these four Punnett squares showing different crosses. Then, shade **red** all the homozygous dominant offspring. Shade **green** all the heterozygous offspring. Leave all the homozygous recessive offspring unshaded.

	N	N
n		
n		

	N	n
N		
N		

	N	n
n		
n		

	N	n
N		
n		

Monohybrid Cross Practice

5. 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 have both *Bb* or have heterozygous black fur.

	B	b
B		
b		

Genotypes: _____ % homozygous black fur (BB)
 _____ % heterozygous black fur (Bb)
 _____ % homozygous brown fur (bb)

Phenotype: _____ % black fur
 _____ % brown fur

6. 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)

Phenotype: _____ % black fur
 _____ % brown fur

7. 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)

Phenotype: _____ % black fur
 _____ % brown fur