

Assignment:

1. The alleles for hair colour in rabbits express incomplete dominance. If a black rabbit (H^B) mates with a white rabbit (H^W). What are the probable genotypes and phenotypes of their offspring? Complete a Punnett square

	H^B	H^B	Genotypes:	Phenotypes:
H^W	$H^B H^W$	$H^B H^W$	_____ % $H^B H^B$	_____ % black
H^W	$H^B H^W$	$H^B H^W$	<u>100</u> % $H^B H^W$	<u>100</u> % grey
H^W	$H^B H^W$	$H^B H^W$	_____ % $H^W H^W$	_____ % white

2. If one of the offspring from question #1, grey rabbit, mates with a white rabbit...What are the possible genotypes and phenotypes of the next generation of rabbits?

	H^B	H^W	Genotypes:	Phenotypes:
H^W	$H^B H^W$	$H^W H^W$	<u>0</u> % $H^B H^B$	_____ % black
H^W	$H^B H^W$	$H^W H^W$	<u>50</u> % $H^B H^W$	<u>50</u> % grey
H^W	$H^B H^W$	$H^W H^W$	<u>50</u> % $H^W H^W$	<u>50</u> % white

3. Tail length in dogs is determined by incomplete dominance. Long-tailed dogs ($T^L T^L$) and short-tailed dogs ($T^S T^S$) will produce medium-tailed dogs ($T^L T^S$). What are the genotypes and phenotypes if two medium-tailed dogs have offspring? Draw a Punnett square.

	T^L	T^S
T^L	$T^L T^L$	$T^L T^S$
T^S	$T^L T^S$	$T^S T^S$

Genotypes:

25% $T^L T^L$

50% $T^L T^S$

25% $T^S T^S$

1:2:1 ratio

Phenotypes:

25% Long-tailed

50% Medium-tailed

25% Short-tailed