

Genetics Test Study Guide

Name: \_\_\_\_\_

1. Color blindness is a recessive trait. Both the mother and father are carriers. Use a Punnet Square to determine the following. What percentage of the offspring are Normal? 25 % What percentage of the offspring are carriers? 50 % What percentage of the offspring are colorblind (affected)? 25 %

N = normal  
n = colorblind

♂ Nn  
♀ Nn

	N	n
N	NN	Nn
n	Nn	nn

2. A heterozygous black rabbit is crossed with a homozygous white rabbit.

What percentage would be black? 50 %

What percentage would be white? 50 %

Bb

bb

B = Black  
b = white

	B	b
b	Bb	bb
b	Bb	bb

- heterozygous Black

Homozygous white

3. In purple people eaters, one horn is dominant and no horn is recessive. Draw a Punnet Square showing the cross of a purple people eater that is Purebred for horns (HH) with a purple people eater that does not have horns (hh). What percentage of the offspring would have a horn? 100 % What percentage would have no horns? 0 %

	H	H
h	Hh	Hh
h	Hh	Hh

4. Mendel found that crossing round-seeded plants with wrinkle-seeded plants produced only round-seeded plants. What phenotype of seeds would you have if you crossed a (Rr) with a (Rr)?

R = Dominant Round      r = Recessive Wrinkled

What percentage of the seeds would be round? 75 %

What percentage of the seeds would be wrinkled? 25 %

	R	r
R	RR	Rr
r	Rr	rr

VOCAB

Homozygous Recessive

Homozygous Dominant

Heterozygous

Gamete

Phenotype

Genotype