Chapter 10: Dihybrid Cross Worksheet

In rabbits, gray hair is dominant to white hair. Also in rabbits, black eyes are dominant to red eyes. These letters represent the genotypes of the rabbits:

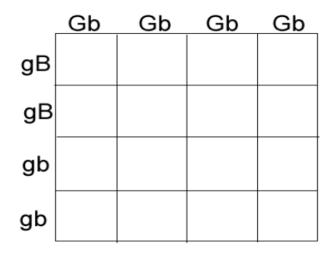
GG = gray hair	BB = black eyes
Gg = gray hair	Bb = black eyes
gg = white hair	bb = red eyes

1. What are the phenotypes (descriptions) of rabbits that have the following genotypes?

 Ggbb ______ ggBB ______

 ggbb ______ GgBb ______

2. A male rabbit with the genotype GGbb is crossed with a female rabbit with the genotype ggBb the square is set up below. Fill it out and determine the phenotypes and proportions in the offspring.



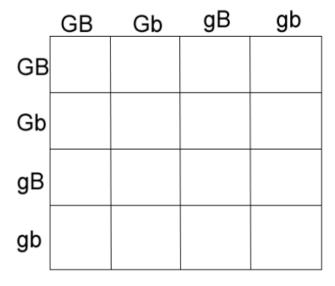
How many out of 16 have gray fur and black eyes? ______

How many out of 16 have gray fur and red eyes? _____

How many out of 16 have white fur and black eyes? _____

How many out of 16 have white fur and red eyes._____

3. A male rabbit with the genotype GgBb is crossed with a female rabbit with the genotype GgBb The square is set up below. Fill it out and determine the phenotypes and proportions of offspring



How many out of 16 have gray fur and red eyes? _____

How many out of 16 have white fur and black eyes? _____

How many out of 16 have white fur and red eyes? _____

How many out of 16 have gray fur and

4. Show	the cross betwe	en a ggBb	and a GGBb. Y	ou'll hav	e to set this	one up you	urself:		
Punnett	Square:								
barbs (B)	uatic arthropod) is dominant ov istance to pestic n.	er smooth	(bb). In the sa	me orga	nism Non-re	esistance to	pestici	des (N) is d	ominant
Genotyp	e	Phenotype							
BB Bb bb NN Nn nn									
	ops that is resist gous for both tr		the genotype			s crossed w	vith one	that is	
7. Set up	a punnett squa	re for the	cross.						
		<u> </u>							

8. What are the phenotypic ratios of the offspring?

DiHybrid Practice Problems

 In man, assume that s wooly hair (W) is domina heterozygous spotted, no woman. Give genotypic a 	nt over non- on-wooly ma	wooly hair (n with a het	w). Cross a erozygous	a marriage l	oetween a
 In horses, black is dep allele, b. The trotting gait allele, t. If a homozygous be the appearance of the 	is due to a d black pacer	dominant ge is mated to	ene, T, the	pacing gait	to its recessive
3. In summer squash, whi shaped fruit (D) is domina white, disk-shaped fruit is	nt over sphe	ere-shaped f	ruit (d) If	a squash pla	nt true-breeding for

	ck hair (B) i he parent g		it		
ouse with a	a homozygo	ous runninç	g,		
use with a	heterozygo	us running	,		
c. Cross a waltzing brown mouse with a waltzing brown mouse					
	use with a	use with a heterozygo	use with a heterozygous running		

Parental genotypes				1
Possible gametes				
Offspring phenotypic ratio				
e. Cross a heterozygous running, brown mouse with a	heterozygou	us running,	homozygo	us
black mouse				
5				
Parental genotypes				
Possible gametes				
Offspring phenotypic ratio				
f. Cross a heterozygous running, heterozygous black n	nouse with a	heterozva	ous runnin	n
heterozygous black mouse				J,
Parental genotypes				
Possible gametes				
Offspring phenotypic ratio				

d. Cross a homozygous running, heterozygous black mouse with a waltzing brown mouse

1.Set up a punnett square using the following information:		
 Dominate allele for tall plants = D Recessive allele for dwarf plants = d Dominate allele for purple flowers = W Recessive allele for white flowers = w Cross a homozygous dominate parent (DDWW) with a homozygous recessive parent 		
(ddww)		
2. Using the punnett square in question #1:		
a. What is the probability of producing tall plants with purple flowers?Possible genotype(s)?		
b. What is the probability of producing dwarf plants with white flowers? Possible genotype(s)?		
c. What is the probability of producing tall plants with white flowers? Possible genotype(s)?		
d. What is the probability of producing dwarf plants with purple flowers?		
Possible genotype(s)?		
 3. Set up a punnett square using the following information: Dominate allele for black fur in guinea pigs = B Recessive allele for white fur in guinea pigs =b Dominate allele for rough fur in guinea pigs =R Recessive allele for smooth fur in guinea pigs = r Cross a heterozygous parent (BbRr) with a heterozygous parent (BbRr) 		
4. Using the punnett square in question #3: a. What is the probability of producing guinea pigs with black, rough fur?		
Possible genotype(s)?		
b. What is the probability of producing guinea pigs with black, smooth fur?		
Possible genotype(s)? c. What is the probability of producing guinea pigs with white, rough fur?		
Possible genotype(s)?		
d. What is the probability of producing guinea pigs with white, smooth fur? Possible genotype(s)?		