## Punnett Square Worksheet and to villided on an Italia.

Black is the dominant fur color for rabbits and white is the recessive. B stands for the black allele and b represents the white allele. A white rabbit would have a genotype of bb and a black rabbit could have a genotype of BB or Bb.

1. Fill in the missing information for each Punnette square below:

Cross 1	MVC.		Cross	Cross 2			Cross 3		
- 1. B	В	В	blue cyc	b	<b>p</b>	the parents I	B	de dend	Vhat are Cross Cross
<b>B</b>	he Punn	General Fillia	d ecess ve.	short (t) is n	ints and	B to pe pla	ned <sup>2</sup> 1. domina	21 (T) IIs	ssume t
B. it so	n genoty	dant wit	another j	rossed with	e It is c	with genoty d	a plant	ult wher	vould res
Cross 4			Cros	s 5		Cross 6			
	В	В		b	b		В	b	
В	siy hair i who is	s recessi nomozy	В	traight bair imsni for st	s domin eight ha	TO	e ebicoi	uriv has	asuries eir
b		College	g et <del>q no</del> b		bility of	B Cobe	BIMPAR	de eeoro	rom the
Cross 7			Cros	s 8		Cross 9		J	_
	В	b							
b				Bb	Bb		ВВ	Bb	
b	içk hair	is gome	lyg lad	Bb	Bb	ris dismov	BB	Bb	

2. List the probability of having black fur for each cross

Cross	
C1022	L .

Cross 2:

Cross 3:

Cross 4:

Cross 5:

Cross 6:

Cross 7:

Cross 8:

Cross 9:

	2:								
Cross						lor for rabb	nt file on		
Cross	4.					llele. A whi			
Cross Cross	55:								
Cross									
Cross			are below:	mette squa		rmation for e			
Cross	9:		Cross 3			Cross 2			Cross 1
** **		1.		C	9 % 0				1 6601
What are Cross	the gend	otypes o	f the parents	for crosse	es 8 & 9		В	8	
Cross									
			8						8
Assume t	tall (T) is	s domina	ant for pea p	lants and	short (t)	is recessive.	Fill in	the Punr	ette squa
would res	sult when	n a plan	t with genoty	ype Tt is c	rossed v	with another	plant wit	h genoty	pe tt.
-									
and the second s									
		,				Cross 5			Tross 4
		SI			d				
4	e hat ros	Arguma Per				es are crossed.			
						G			
From the	cross at	ove wh	at is the prol	oability of	having	a short pea p	lant?		
			9						
						of a constant of the second			
			Cross 9			Cross 8			
	Bb			Bb	dB				ď
	Bb			dB	dB				d
	Bb			da	Bb				d

## IA2: Punnett Square Worksheet-Human Characteristics

Directions: Complete the following Punnett Squares. Be sure that you include the ratios of the genotypes (and the words used to describe those alleles) and phenotypes of the characteristics. See the example on webpage if you need a reminder. For extra help, you can contact Noemi Waight at <a href="mailto:nwaight@uiuc.edu">nwaight@uiuc.edu</a>. She will answer any questions you may have.

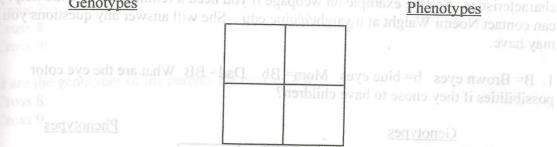
1. B= Brown eyes b= blue eyes Mom= Bb Dad= BB What are the eye color possibilities if they chose to have children?

ossibilities if they chose to have children:	
Genotypes	Phenotypes
tal (5'11"-("2"); Tr=medium height (5'4"-5'10") (=short (5'3" or smaller)	. Incomplete dominance problem: T=
the possible height outcomes of their children?	•
(21.2) testo lin a stiw bessens si (TT) mala its: A (21.2) Phenotypes	Genotypes
2. Curly hair is recessive, and straight hair is dominated man who is homozygous dominant for straight hais children.	ant. A woman with curly hair marries r. Predict the outcomes for their
<u>Genotypes</u>	Phenotypes
are dominan.  morygous recessive Possible outcomes for kids?  on second orders a form become a (19) nearth for A (19)  Phenotypes	Freckles are recessive. No freckles  Mom- heterozygous Dud-hor  Genotypes
3. Black hair is homozygous dominant. Brown hair nomozygous recessive. (This is an example of incoprown hair marries a man with brown hair. What anxids?  Genotypes	r is heterozygous. Blonde hair is mplete dominance.) A woman with
Cy in Mark County (1879 to recent with Colors of Act	

4. Attached earlobes are dominant over free hanging earlobes. Complete the Punnett Square for the following individuals: Mom=BB and Dad=bb

Genotypes

Phenotypes



5. Incomplete dominance problem: T=tall (5'11"-6'2"); Tt=medium height (5'4"-5'10") t=short (5'3" or smaller)

Mom= 5'5" Dad= 6'0"

What are the possible height outcomes of their children?

2. Curly hair is recessive, and st aight hair is dominant. A woman with curly hair matries a man who is homozygous dominant for a raight hair. Predict the outcomes for their children.

Cheotypes and a gasten ha white out at and work a research of the control of the children.

6. Freckles are recessive. No freckles are dominant.

Mom= heterozygous Dad=homozygous recessive Possible outcomes for kids?

sequiples

3. Black hair is homozygous dominant. Brown hair is heterozygous. Blonde hair is homozygous recessive. (This is an example of incomplete dominance.) A woman with brown hair marries a man with the homozygous recessible outcomes for their kids?

Genotypes

Genotypes

## Punnett square worksheet

Complete the following monohybrid crosses: draw a Punnett square, list the ratio and describe the offspring. Be sure to remember that the <u>capital letter is dominant</u>.

-		
Exam	ni	P
WALKER IN	$\nu$	~

A green pea plant (GG) is being crossed with a green pea plant (Gg) yellow is the recessive color.

			G	G	recessive color).
		G	GG	GG	GenoType= 2 GG: 2 Gg; 0 gg
		g	Gg	Gg	Phenotype= 4 Green pea plants: 0 yellow pea plants
1)	A green	pea plant (			yellow pea plant (gg).  Two heteroxygous white (brown fur is recessive)
					Z. 1 Wo headoxygous white (orowhital is recessive)
2)	A tall pla	nnt (TT) is	crossed wi	ith a tall pla	ant (Tt).
					to the state of th
					3. Two heterozygous red flowers (white flowers are
3)	A tall pla	nt (Tt) is o	crossed wit	h a short pl	lant (tt).
			(108)		
45/	B	b	tronia) topic		
4)	A red flo	wer (Rr) is	s crossed w	ith a white	flower (rr). W because in table lates were A. A.
					Bb 88 86
5)	A white f			with a whit	te flower (rr).
					S. A licterozygous while rabbil is crossed with a hon
6)	A black c	hicken (B	B) is crosse	ed with a b	lack chicken (BB).

	sups transulfile ratio and describe the minant.	etter is do				
ne offs	te the following problems. List the paren pring genotypes and phenotypes.					
	with a green pea plant (Gg) yellow is the			calor calor		
1.	A homozygous dominant brown mouse recessive color).	is crossed	with a hete	rozygous	brown mouse	
2.	Two heterozygous white (brown fur is r		rabbits are o	rossed.	en pea plant (	I) A gre
۷.	1 Wo liete 102, gods wille (crown all a				on beign (	
				crossed w	plant (TT) is	
3.	Two heterozygous red flowers (white fl	lowers are	recessive) a	ire crossec	1.	
		ant (tt):		rossed wit		
4.	A homozygous tall plant is crossed with			lant (shor	t is the recess	ive size).
	Genetages					
				s crossed		D A WITH
5.	A heterozygous white rabbit is crossed	with a ho	mozygous b	lack rabb	it.	