Name: <u>Fey</u> Date: Period:
Punnett Square Worksheet 2
Directions: Read each problem carefully. Make a "key" for the trait, identify the parents involved in the cross and the gametes each parents produces. Show the Punnett square and give the ratio of both genotype and phenotype.
Before you beginDefine the following terms from your notes
Homozygous The same alleles on both chronosomes EXI RR, rr Heterozygous The palleles are different. Phenotype exi Rr The way it looks or feels. (physical) Genotype Genetic code, Rl, rr, Rr. Dominant Trait takes over
> Recessive trait covered up
1. In rabbits, black fur is dominant over white fur. Show the cross of a heterozygous black male with a homozygous white female.
3=black fur b=white fur BBb
Gametes:
\sim 1

Parents & 2. Tall is dominant over short in pea plants. Show the cross of a homozygous short

plant is crossed with a homozygous tall plant.

Key: / = tall Parents & Gametes: Parents = tt xTT Tt, 4, 100%, tall

3. In humans, free-ear lobes are dominant to attached. Two heterozygous free are expecting a child. What are the ch have free ear lobes of attached?	-	
Key: F = Free-ear lobes f = attached F	FF	FS
Parents & Gametes: parents = Ff x Ff Offspring = FF, 4, 25%, Free Ff, 34, 50%, Free	Ff	tt.
4. Wrinkled seed are recessive to smooth seeds. Show a play wrinkled seeds crossed with a heterozygous smooth seed.	ant that always producing plan	produces at.
Key: W = 5 mooth w = wrinkled W	Ww	Win
Parents & Gametes: Parents = WW X Wx Ww = 7,50%, smooth w	W.W	ww
5. As in the previous problem Show a heterozygous smooth another heterozygous smooth seed producing plant.	oth plant crossed	l with
Key: W= Smoth w=wrinkled	WW	Ww
Parents & Gametes: Parents Ww X Ww. WW, Yu, 25% - Smooth Ww, 24, 50% - Smooth	Ww	WW.
6. Blue eyes are dominant to red eyes in rabbits. Show a he rabbit crossed with a red-eyed rabbit.	terozygous blue	-eyed
Key: B= blue b= red	BL	66
Parents & Gametes: parents = Bb x bb Bb, 3/4, 50%, blue eyes b	Bb	bb
7. In fruit flies, red eyes are dominant over white eyes. Showhite-eye fruit flies.	w a cross betwe	en two
Key: P = red eyes r = White eyes	rr	rr
Parents & Gametes: rr x rr	rr	rr
rr - 4/4, 106%, white eyes	Langes	only

Example)						
A green pea plant (GG) is being crossed with a green pea plant (Gg).						
		G	G			
				GanaTuna 2 GG: 2 Ga: 0 aa		
	G			GenoType= 2 GG: 2 Gg; 0 gg		
		GG	GG			
	g			Phenotype= 4 Green pea plants: 0 other color		
		Gg	Gg			
	Į					
1) A gre	en pea plant (C	g) is cross	sed with a y	rellow pea plant (gg).		
2) 4 4-11	-1	1 24		. (77)		
2) A tall	plant (TT) is c	rossed with	n a tali pian	it (Tt).		
3) A tall	plant (Tt) is cro	ossed with	a short plai	nt (tt).		
		*				
4) A red flower (Rr) is crossed with a white flower (rr).						
,,	40 1102 (24) 200		iru winto ir			
5) A white	e flower (rr) is	crossed wi	th a white t	lower (rr).		
6) A black	chicken (RR)	is crossed	with a black	k chicken (BB).		
-, xx 0140N	· cincion (DD)	TO CLOSSOG	min a order	a omotion (DB).		
				: i !		

Punnett square problems continued $\sqrt{}$

Complete the following problems. List the parent genotypes, draw and fill in a Punnett square, and then list the offspring genotypes and phenotypes.

)II;	spring genotypes and phenotypes.
1.	A homozygous dominant brown mouse is crossed with a heterozygous brown mouse (tan is the recessive color).
2.	Two heterozygous white (brown fur is recessive) rabbits are crossed.
3.	Two heterozygous red flowers (white flowers are recessive) are crossed.
ļ.	A homozygous tall plant is crossed with a heterozygous tall plant (short is the recessive size).
•	A heterozygous white rabbit is crossed with a homozygous black rabbit.



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>.

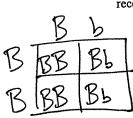
Example)

A green p	ea plant (C	G) is being	g crossed with a green pea plant (Gg).
	G	G	~ ¹ / ₂
	GG	GG	GenoType= 2 GG: 2 Gg; 0 gg \\ \bigcup_{\rho} \bigcu
g	Gg	Gg	GenoType= 2 GG: 2 Gg; 0 gg Phenotype= 4 Green pea plants: 0 other color (G, Po, X4)
1) A green pea plant (Gg) is cros	sed with a	(7)
Gia, =	1,50	5%,9	reen G Gg Gg
99 , $\frac{3}{4}$ 2) A tall plant (TT) is 6	,		O 71/1 - 71/1
TT, 3	F,50	12, Ta	
3) A tall plant (Tt) is cr			and the contract of the contra
Tt, 24			
tt, 2/4,	50%	7, 51	Cort
4) A red flower (Rr) is a			- Roll KDalla
55,2/4,5	0%	white	
5) A white flower (rr) is	crossed w	vith a white	flower (II).
1174,16		who	1 cc cc
6) A black chicken (BB)	is crossed	l with a bla	ck chicken (BB).
BB, 1/4,	100%	, blac	BBBB

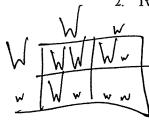
Punnett square problems continued \

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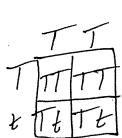
1. A homozygous dominant brown mouse is crossed with a heterozygous brown mouse (tan is the



Two heterozygous white (brown fur is recessive) rabbits are crossed.



4. A homozygous tall plant is crossed with a heterozygous tall plant (short is the recessive size).



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

