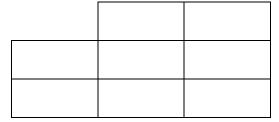
Name .					Period	Date
		Practic	e Genetics Pr	oblems III		
	plete Dominance:					_
1.	In Japanese four-o'clocks re	d (<i>R</i>) is incomple	ete dominance	to white (r), pr	edict the phenc	type ratio of a cross
	between:					
a.	a red plant (RR) and white p	lant (<i>rr</i>)			7	
					_	
	Phenotypic ratio					
b.	a white plant (rr) and a pink	plant (<i>Rr</i>)				
		p			7	
	5 1					
	Phenotypic ratio					
2	In same sate the gane for to	il langth is insor	malatalı damin	ant Catawith I	ong toils (II) on	nd no toils (II) are
۷.	In some cats the gene for tail length is incompletely dominant. Cats with long tails (LL) and no tails (II) are homozygous for their respective alleles. Cats that are a hybrid have short tails (LI). Predict the phenotype ratio of					
	a cross between:	ctive afferes. Car	is that are a riyi	ond have short	talis (Li). Freuit	it the phenotype ratio o
a	a long tail cat (LL) and a cat	with no tail (//)				
a.	a long tall cat (LL) and a cat	with no tall (n)			7	
	Phenotypic ratio					
	Thenotypic ratio					
b.	two short tail cats (Ll x Ll)				¬	
					-	
			1	1	_	
	Phenotypic ratio					

Codom	inance:					
3.	In shorthorn cattle, neither red hair (RR) nor white hair (WW) is dominant. The hybrid is roan, or a mixture of red and white hairs (RW) .					
a.	Cross a red haired bull (RR) with a white haired cow (WW). What are the genotypic and phenotypic ratios of the F_1 generation?					

	i 1 generation:					
					I	
	F ₁ Phenotypic ratio					
	111 Henotypie ratio					
	F. Canatamia matia					
	- "					
b.	Cross the offspring from the F ₁ generation. What are the genotypic and phenotypic ratios of the F ₂ generation?					
		L	1	I.	1	
	F ₁ Phenotypic ratio					
	· /!					

a. Cross a black-feathered (BB) chicken with a speckled (BW) rooster.



b. What percentage of the offspring will have speckled feathers?

c. What percentage of the offspring will have white feathers?

Challenge (+2 points total):

- 5. A naturalist visiting an island in the middle of a large lake observes a species of small bird with three distinct types of beaks. Those with short, crushing beaks (*BB*) consume hard shelled nuts, those with long, delicate beaks (*bb*) pick the seeds from pine cones, and those with intermediate beaks (*Bb*), consume both types of seeds though they are not as good at either. Assume that this difference in beak morphology is the result of incomplete dominance in a single locus gene. Which of the mated pairs below will have the best adapted offspring in a year in which most of the food available is in the form of hard shelled nuts? Show the cross with a Punnett square and **explain your reasoning**.
 - a. short x short

c. short x long

e. intermediate x long

- b. short x intermediate
- d. intermediate x intermediate
- f. long x long