BIO 184 - PAL Problem Set Lecture 9 (Brooker Chapter 4) Extensions of Mendelian Inheritance

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Action	^	Haminant	vs. recessiv	
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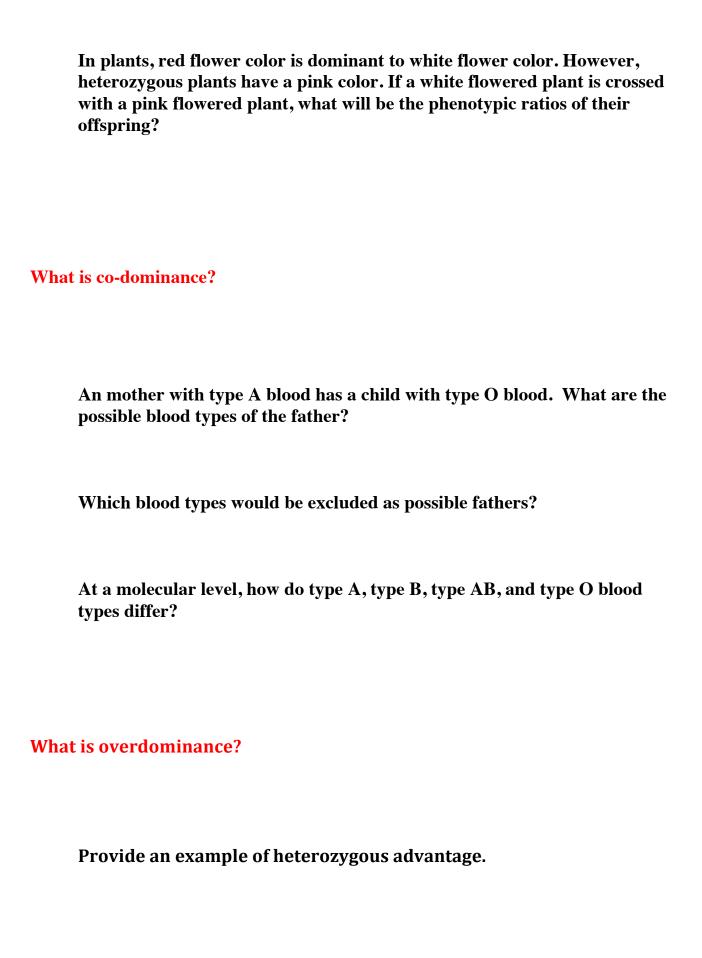
How can dominant and recessive alleles be explained?

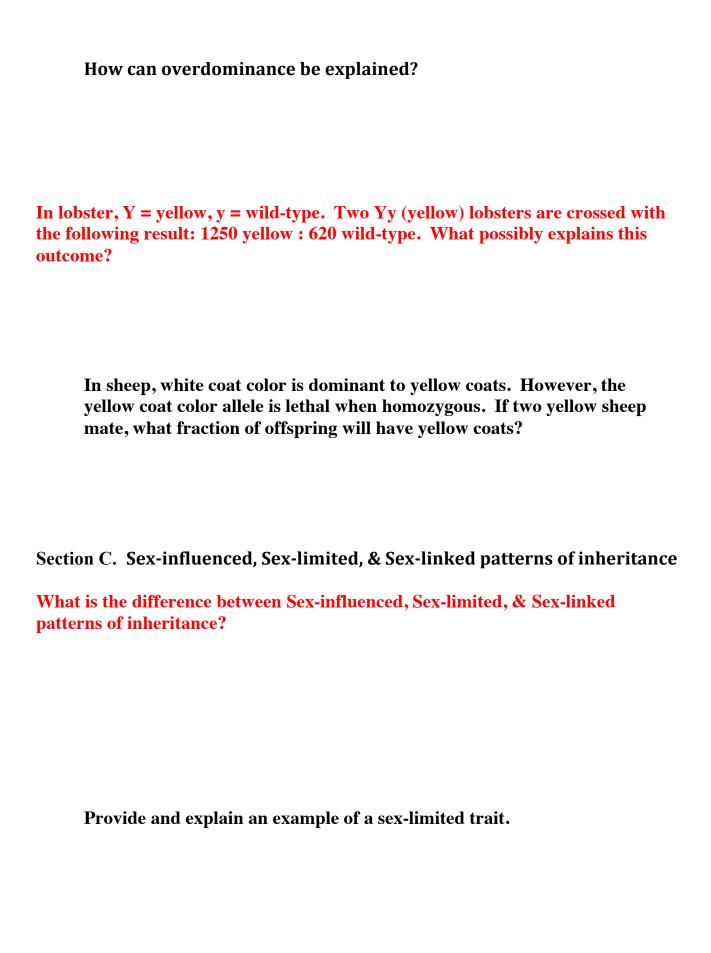
Are nascent (newly made) mutations most commonly dominant or recessive? Why?

Can nascent mutations be dominant? Why?

Section B. Extensions of Mendelian Inheritance

What is the simplest explanation to when a monohybrid self-cross results in a phenotypic ratio of 1:2:1 and the majority of the offspring are an intermediate between the other two minority phenotypes? Explain.





What is a Barr body?
What is the result of a Barr body in terms of gene expression?
How many Barr bodies does a XXXY genotype have?
How are the fir pattern of calico cats explained by Barr bodies?
Is it possible to have a male calico cat? If so, how?
on D. Penetrance and gene redundancy lominant trait is describes as being 55% penetrant, what does this mean?

	A female carries the dominant allele BRAC1 for breast cancer, but never levelops breast cancer in their lifetime. What is this an example of?
	sex determined in humans, insects (involving XO system), birds (ZW), nd ants?
F	How do bees and ants produce male offspring?
F	How do bees and ants produce female offspring?
What is	s epistasis?
P	Provide an example of epistasis.

What	is gene redundancy?
	What type of chromosomal rearrangement causes gene redundancy?
	How does gene redundancy complicate generating gene knockouts?