

Bio 3  
 Johansson  
 3/6/13

Exam Mar. 20 - take-home/blackboard  
 open 3/4/13 @ Noon

## Phenotypes & Genotypes

"In turnips, flat leaves are dominant over 'crinkled' leaves. → A farmer crosses a turnip with 'crinkled' leaves with one that has flat leaves, but had a parent with crinkled leaves. He gets 200 seeds from that cross. How many seeds are expected to produce crinkled leaves?"

① AA = dom  
 { Aa = dom (flat)  
 { aa = rec (crink)

♂ = Aa  
 ♀ = aa

♀ <del>flat</del> a	A	a	
♂ A	Aa	aA	50/50
♂ a	Aa	aa	

AA	11 - flat
aa	11 - crink.
Aa	
Aa	

Phenotype

50/50

- 3 ideas Mendel used for explaining this pattern of Inheritance

1. Each parent puts into every sperm or egg it makes a single set of instructions for building the trait
2. Offspring thus find themselves w/ 2 copies
3. Actual trait produced by an indiv depends on the 2 copies of gene inherited.
  - homozygous - heterozygous

- Observing phenotype not sufficient for determining genotype.

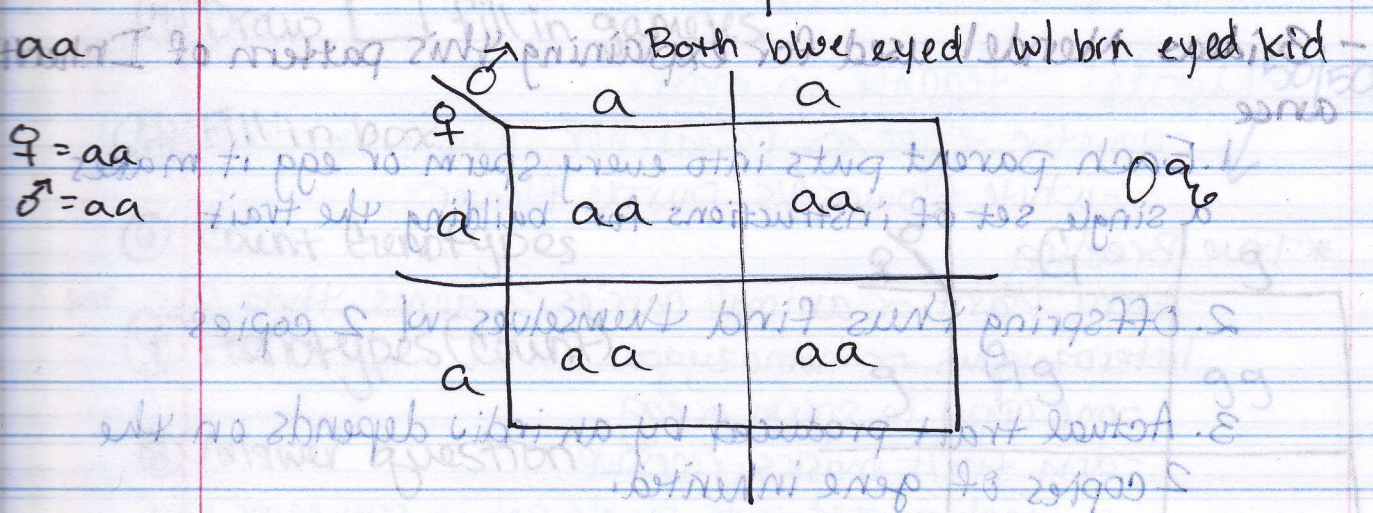
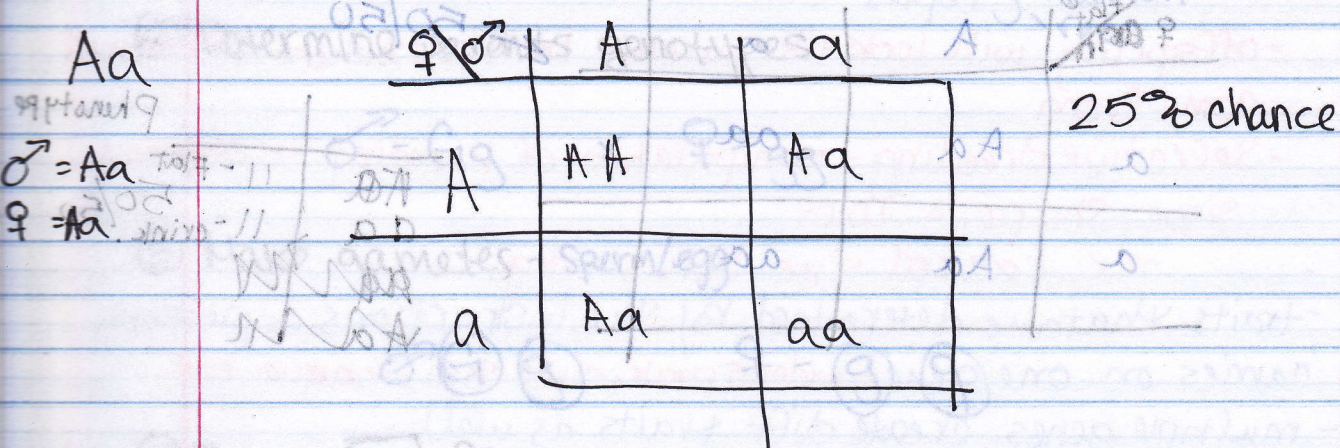
Phenotype - Albino  
 Genotype - recessive gene for Albinism

- Pos. Genotypes
- Homozygous Dom. = AA
  - Heterozygous = Aa
  - Homozygous Rec = aa

Phenotypes & Genotypes

"In turkeys, flat leaves are dominant over 'crinkled' leaves. Recessive allele's effects may be masked by traits"

What is the chance that 2 brn eyed Humans (both heterozygous) will have a blue eyed kid.



Phenotype - Albinism  
 Genotype - recessive pair for Albinism

Genotypes  
 Homozygous Dom. = AA  
 Heterozygous = Aa  
 Homozygous Rec. = aa