

3-31-14

Punnett Squares

1. Write the Key

2. Determine the parents genotype.

3. Make gametes

4. Draw  $\square$  fill in gamete

5. Do the cross!

6. Count genotypes & phenotypes

7. Answer the question

Key

Retrievers  $E =$  floppy ears  
 $e =$  erect ears

2 genotypes

$\sigma = ee$   
 $\text{♀} = Ee$

3 Gametes

$(Ee)$   $(ee)$

4. Square / 5. the cross

	$\sigma$	$e$	$e$
$E$	$Ee$	$Ee$	
$e$	$ee$	$ee$	
$\text{♀}$			

6. Genotypes

$Ee - 11 - 50\%$

$ee - 11 - 50\%$

Phenotype

floppy - 11

erect - 11

8-31-14  
On Our Own Example

1. Poppies  
Y = orange  
y = yellow

2.  $XO^{\sigma}$      $O$   
Yy        Yy

3.  $(Yy)$      $(Yy)$

4. 15

	Y	y
Y	YY	Yy
y	Yy	yy

Yellow is recessive  
Orange is dominant.  
Cross 2 poppies one heterozygous  
for color.  
The other is orange w/a yellow  
father.

How many yellow poppies  
should result from 80 seeds

Genotype	Phenotype
YY - 1	orange
Yy - 11	orange
yy - 1	yellow

7. 80  
0.25  
1400  
1600

2000 are yellow