

Name: _____ Date: _____

Fruit Fly Genetics - Single Allele Trait

In fruit flies, vestigial (gg) wings are a recessive trait. Flies with this phenotype have tiny wings and cannot fly.

1. Complete the chart:

Genotype	Phenotype
GG	Wings
	Wings
	Vestigial wings



2. A heterozygous fly is crossed with a vestigial winged fly. What are the genotypes of the parents? ____ x ____

Show the crosses with a Punnett square

What percentage
will have wings?

What percentage will be
vestigial winged?

3. Two heterozygous flies are crossed. What are the genotypes of the parents? ____ x ____

What percentage
will have wings?

What percentage will be
vestigial winged?

4. A homozygous normal fly is crossed with one that has vestigial wings.

What are the genotypes of the parents? ____ x ____

What percentage
will have wings?

What percentage will be
vestigial winged?

5. A homozygous normal fly is crossed with a heterozygous fly. What are the genotypes of the parents? ____ x ____

What percentage
will have wings?

What percentage will be
vestigial winged?

Fruit Fly Genetics - Sex Linked Trait

In fruit flies, the allele for eye color is located on the sex chromosomes. Red (R) is dominant to white (r)

1. Complete the charts:

Genotype	Phenotype
X^RX^R	Red, female
X^RX^r	
	White, female

Genotype	Phenotype
X^RY	Red, male



2. A white eyed female is crossed with a red eyed male.

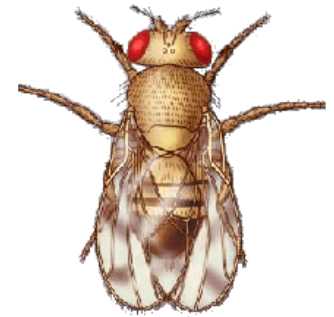
How many offspring are....

Female with white eyes: ____

Female with red eyes: ____

Male with red eyes: ____

Male with white eyes: ____



3. A heterozygous red eyed female is crossed with a red eyed male.

How many offspring are....

Female with white eyes: ____

Female with red eyes: ____

Male with red eyes: ____

Male with white eyes: ____

4. A homozygous red eyed female is crossed with a white eyed male.

How many offspring are....

Female with white eyes: ____

Female with red eyes: ____

Male with red eyes: ____

Male with white eyes: ____

5. A heterozygous red eyed female is crossed with a white eyed male.

How many offspring are....

Female with white eyes: ____

Female with red eyes: ____

Male with red eyes: ____

Male with white eyes: ____