Fruit Fly Genetics Experiment Work Sheet

- Fill all the blanks with information from the outcome screen on the web application
- Draw the Punnett squares with male genotypes on the left and female genotypes on the top.
- Every box has 25% probability. Depending on the offspring produced, divide the number of offspring into different types and calculate number of each type of traits.

Generation Number: 1   **Number of offspring:** 4

Cross Type: di

*Fill parents 1 for mono cross, 1&2 for di cross and 1, 2&3 for tri cross.

Cross Type	Phenotype Selected	Dominant Allele	Recessive allele
Parents 1	Eye color	Red eye, +	White eye, w
Parents 2	Wing Type	Wild, +	Curly, cy
Parents 3			

Punnett Square Prediction:
List down all the combination possible for selected genotypes:-

A - + , a – w, B - +, b - cy

AB, Ab, aB, ab

Draw and fill Punnett square:-
* For instruction on how to fill Punnett squares, see instruction page on web application.

	AB	Ab	aB	ab
AB	AABB	AABb	AaBB	AaBb
Ab	AABb	AAbb	AaBb	Aabb
aB	AaBB	AaBb	aaBB	aaBb
ab	AaBb	Aabb	aaBb	aabb

List down your outcome from Punnett square:

1-AABB, 2-AABb, 2-AaBB, 4- AaBb, 2-Aabb, 2-aaBb, 1-AAbb, 1-aaBB, 1-aabb

56.25 % - Red Eye with wild type wings, 18.75 % - Red eye with curly wings, 18.75 % - White eye with wild wings,

6.25 % - White eye with curly wings.

Does your results match with the data from the experiment?   *Yes / No*

If no, what do you think is the reason for it?