

F1 x Tester

male Tt x female tt

| |

1/2 T and 1/2 t All t gametes

		Female	
		t	
Male	1/2 T	1/2 Tt	Tt x tt
	1/2 t	1/2 tt	

3:1 , 1:1 , 1:2:1 are all diagnostic for single gene inheritance

- When you do a cross you're looking for single gene ratios. But you won't get an exact 3:1 ratio and exact numbers for example. Look for "are your numbers too close to the ratio?"
- How do you know if you're close or far away from the expected ratio - Determine this using a goodness of FIT test using CHI - SQUARE
- If the observed numbers are exactly as expected, goodness of fit is 0. As the numbers differ, goodness of fit value get's larger. If the value is too large, you reject the notion that it was a 3:1 ratio.

- A gene is the basic functional unit of a genome and is a unit of transcription.
- The perpetuation of life through time is based on high-fidelity replication of a genome's DNA.
- Hereditary change is caused mostly by mutations in DNA, but also by epigenetic effects.
- Forward Genetics: Mutation of normal wild type cell → Gene Discovery → DNA sequence and function.
- Reverse Genetics: Gene (DNA sequence) that has no function → mutation by knocking out the gene → look for effects on the organisms function.