

**ANSWER KEY – DIHYBRID CROSS GENETIC QUESTIONS**

- The genotypes of the parents are: TTYy and ttyy
- The sex cell possibilities are TY, Ty and ty, ty
- The genotype of the F1 offspring are TtYy and the phenotype is tall and yellow
- The possible sex cells of the offspring are: TY, Ty, tY, ty and TY, Ty, tY, ty
- The F2 generation punnett square is:

	TY	Ty	tY	ty
TY	TTYy	TTYy	TtYy	TtYy
Ty	TTYy	TTYy	TtYy	TtYy
tY	TtYy	TtYy	ttYy	ttYy
ty	TtYy	TtYy	ttYy	ttYy

- The phenotypes in the F2 are: Tall and yellow, Tall and green, Short and yellow, short and green.
- Ratio for the phenotypes are 9:3:3:1 (9 tall yellow: 3 short yellow: 3tall green: 1short green)

**PRACTICE GENETIC QUESTIONS**

- F1 generation will all be genotype Gg and phenotype = green. If a Gg married a Gg, the cross would be:

	G	g
G	GG	Gg
g	Gg	gg

Phenotype of offspring: 3 green and 1 red  
 Phenotypic ratio: 3:1  
 Genotypes of offspring: GG, Gg, and gg

- Parents = Bb, Bb