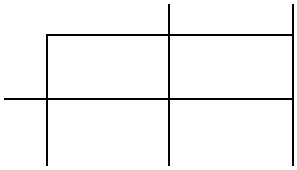
Monohybrid Crosses

Trait	Dominant Allele	Recessive Allele
pod shape	smooth (N)	constricted (n)
pod color	green (G)	yellow (g)
flower position	axial (A)	terminal (a)
plant height	tall (T)	short (t)

1. A plant that is heterozygous for green pods is crossed with a plant that has yellow pods. What are the probable genotypic and phenotypic ratios in the offspring of this cross?

Genotype Parents _____
Possible Gametes_____ _____

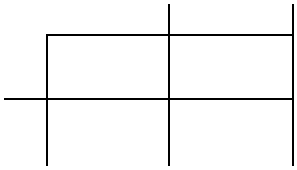


Genotypic ratio _____

Phenotypic ratio _____

2. Nn x NN

Genotype Parents _____
Possible Gametes_____ _____

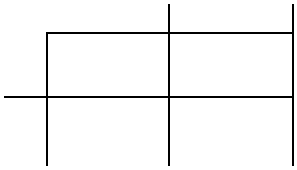


Genotypic ratio _____

Phenotypic ratio _____

3. Aa x aa

Genotype Parents _____
Possible Gametes_____ _____

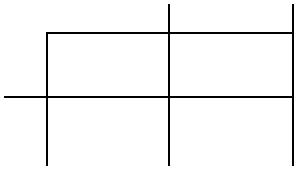


Genotypic ratio _____

Phenotypic ratio _____

4. Tt x Tt

Genotype Parents _____
Possible Gametes_____ _____

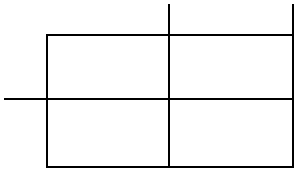


Genotypic ratio _____

Phenotypic ratio _____

5. 2 plants heterozygous for green pods

Genotype Parents _____
Possible Gametes_____ _____

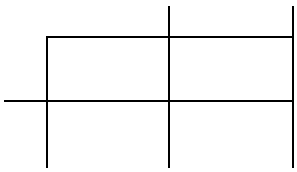


Genotypic ratio _____

Phenotypic ratio _____

6. Plant heterozygous for axial flowers crossed with a plant that has terminal flowers

Genotype Parents _____
Possible Gametes_____ _____

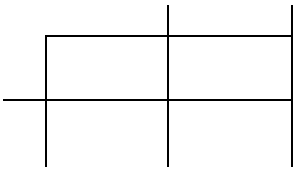


Genotypic ratio _____

Phenotypic ratio _____

7. Homozygous tall plant crossed with a short plant

Genotype Parents _____
Possible Gametes_____ _____

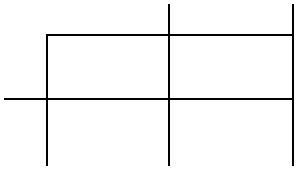


Genotypic ratio _____

Phenotypic ratio _____

8. Heterozygous for smooth pods crossed with a plant with constricted pods

Genotype Parents _____
Possible Gametes_____ _____

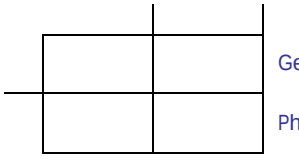


Genotypic ratio _____

Phenotypic ratio _____

9. When a tall plant is crossed with a short plant, some of the offspring are short. What are the genotypes of the parents and the offspring? What is the phenotypic ratio in the offspring?

Genotype Parents _____
Possible Gametes_____ _____



Genotypic ratio _____

Phenotypic ratio _____

10. ¾ of the plants produced by a cross between 2 unknown pea plants have axial flowers and ¼ have terminal flowers. What are the genotypes of the parent plants?

Genotype Parents _____