

INDIAN SCHOOL NIZWA
BIOLOGY-WORKSHEET -6
CH.5 PRINCIPLES OF INHERITANCE

DATE: _____ NAME: _____ CLASS: XII

1. A pea plant with purple flowers was crossed with white flowers, producing 50 plants with only white flowers. On selfing the plants produced 470 plants with purple flowers and 160 with white flowers. Explain the genetic mechanism accounting for the above results.
2. In human beings blue eye colour is recessive to brown eye. A brown eyed man has a blue eyed mother.
 - a) What is the genotype of the man and his mother?
 - b) What are the possible genotype of his father?
3. The gene for yellow seed coat in peas is dominant to its allele, green. What offspring phenotype ratio would be expected from a cross between a pea plant known to be heterozygous for coat colour?
4. In dogs barking trait is dominant over silent trait and the erect ears are dominant over drooping ears.
 - a) What is the expected phenotypic ratio of the offspring when dogs heterozygous for both the traits are crossed?
 - b) What would be the phenotypic ratio if dogs heterozygous for both the traits are crossed with dogs homozygous recessive for both traits?
5. A snap dragon plant for red flower when crossed with a white flowered plant of the same species produced pink flowers in F1 generation .
 - a) What is this phenotypic expression called?
 - b) Work out a cross to show the F2 generation when F1 was self pollinated. Give the phenotypic and genotypic ratios of F2 generation.
 - c) How do you compare the F2 phenotypic and genotypic ratios with those of Mendalian monohybrid F2 ratios.?