1. In pea plants, spherical seeds (S) are dominant to dented seeds (s). In a genetic cross of two plants that are heterozygous for the seed shape trait, what fraction of the offspring should have spherical seeds? What is the Genotype and phenotype of the offspring?
2. A tall green pea plant (TtGg) is crossed with a Short white pea plant (ttgg). Determine the phenotypes of all the offspring.
3. In some chickens, the gene for feather color is controlled by codominance. The allele for black is B and the allele for white is W. The heterozygous phenotype is known as erminette (black and white spotted). Determine the genotypes and phenotypes of the offspring if a black chicken is mixed with an erminette chicken.
4. A red carnation is crossed with a white carnation and the resulting offspring are all pink (indicating incomplete dominance). What would be the result of a cross between a pink and a white carnation? Give the phenotypes of the offspring.
5. A woman who is a carrier for hemophilia marries a man with hemophilia. Could any of their children have hemophilia? If so, would the child be male or female?