

Monohybrid Crosses

Practice Exercises

Complete the following Punnett Squares for the questions below. Find the genotype as well as the phenotype ratios for the possible offspring.

Question 1: Long haired fur is dominant to short haired fur in dogs. Show a cross between a purebred homozygous long haired dog and a purebred homozygous short haired dog. Use the following template as a guide.

P generation: _____ X _____

LEGEND

Homozygous long -
Heterozygous long -
Homozygous short -

Results of a _____ x _____ cross

F₁ genotypes:
F₁ phenotypes:

Question 2: Show a cross between a heterozygous (hybrid) long haired dog with a purebred short haired dog.

Question 3: Solid Green watermelon skin is dominant to striped watermelon skin. Show a cross between a heterozygous solid green watermelon and a homozygous striped watermelon. Find the possible offspring.

Question 4: Black guinea pigs are dominant to white guinea pigs. Find the possible offspring produced as a result of a cross between a hybrid (heterozygous) black guinea pigs and another hybrid (heterozygous) black guinea pig.

Question 5: Tongue rolling is dominant in humans over non tongue rolling. Show a cross between a homozygous tongue roller and a homozygous non tongue roller. Find the possible offspring.

Question 6: Red eyes are dominant to white eyes in fruit flies. Find the ratio of the offspring produced in the following fruit fly cross: Hybrid red eyes with purebred white eyes.

Question 7: In humans, unattached earlobes are dominant to attached earlobes. Find the result for the offspring produced between heterozygous unattached earlobes with another who is also heterozygous for unattached earlobes.

Question 8: Round seeds are dominant to wrinkled seeds in pea plants. Find the results when a hybrid round seed plant is crossed with a pure trait wrinkle seed plant.

Question 9: White flowers are recessive to red flowers some species of carnations. Show a cross between two white flowering plants.

Question 10: Curly hair is dominant to straight hair in humans. Show a cross between a heterozygous curly haired parent with a pure homozygous straight haired parent.