

MONOHYBRID CROSS WORKSHEET 3

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Name

Date

Monohybrid cross problems

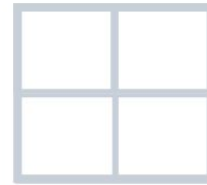
1. A gene encoding mouse coat color has two different alleles that either encode gray (G) or white (g) fur, or dominant and recessive traits, respectively.

a. What would the genotypes and phenotypes of the F1 generation be if a heterozygous gray mouse is mated with a white mouse?

P1 cross: _____

F1 genotype(s): _____

F1 phenotypes: _____

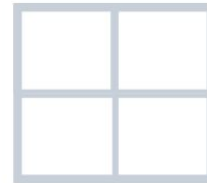


b. What would the F1 genotypes and phenotypes be if a homozygous gray mouse mates with a white mouse?

P1 cross: _____

F1 genotype(s): _____

F1 phenotypes: _____



2a. Two mice with unknown coat colors mated and produced the following offspring: 8 gray coated- and 4 white-coated mice. What were the genotypes and phenotypes of the parents?

2b. If the parents produced all gray offspring, what were the genotypes and phenotypes of the parents?

2c. If 50% of the offspring were gray, what were the phenotypes and genotypes of the parents?

3. A species of orchids have a gene encoding either a dominant pink (P) or recessive white (p) flower color trait. If a heterozygous pink and white flower were crossed, what is the probability that the offspring have white flowers?

