Genotypes and phenotypes

1 In a species of rodent, the allele for black fur is dominant to the allele for brown fur.

a Suggest suitable symbols for these two alleles:

i allele for black fur ………………………………………….

ii allele for brown fur ………………………………………….

b Write the genotype of an animal that is homozygous for brown fur.

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c Write the genotype of a heterozygous animal.

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2 In a type of plant, homozygous individuals can have white flowers or red flowers. Heterozygous individuals have red flowers.

a Choose symbols to represent the two different alleles involved in flower colour.

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b Which allele is dominant? Explain how you worked this out.

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………………………………………………………………………………………...

c Draw a table to show the three possible genotypes and the phenotypes that each of them produces.

3 In a species of fly, there are two alleles for wing size. Allele F, which is dominant, produces full-size wings, while allele f produces small wings.

a What is the phenotype of a heterozygous fly? …………………………………….

b What is the genotype of a fly with small wings? …………………………………….