

GENETICS WORKSHEET ANSWER SHEET

NOTE: Pages 1 & 2 are not included here since there are no problems on these pages.

Section I: Monohybrid Crosses

1. In tomatoes, red fruits are dominant over yellow fruits.

A. What letter would you choose to represent the red and yellow alleles.

RED ALLELE = R YELLOW ALLELE =

r

2. Using your answers from #1, determine the genotypes of these organisms (remember, 2 letters for each trait).

A. homozygous red fruited plant = RR

B. heterozygous plant = Rr

C. yellow fruited plant = rr

D. What is the phenotype (appearance) of plant B ? RED

gave you the essential information to do the task they were presented with:

3. Brown eyes are a dominant eye-color allele and blue eyes are recessive. A brown-eyed woman whose father had blue eyes and whose mother had brown eyes marries a brown-eyed man whose parents are also brown-eyed. They have a son who is blue-eyed. Write a pedigree showing four generations: the two parents, all four grandparents, and the son. Indicate which individuals you are certain of their genotype, and where more than one possibility.

What is Gerdy's genotype? _____

(b) Sponge Billy Bob is heterozygous for his spongey shape. What is his genotype? _____

(c) Complete the Punnett square to show the possibilities that would result if Billy Bob & Gerdy had children.

(d) List the possible genotypes and phenotypes for the kids.

(e) What are the probabilities for each of the kids?