

**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  

E. Why is it unnecessary to call plant C homozygous yellow fruited ?

yellow fruit is the recessive phenotype - must be homozygous recessive

3. For each of the answers in #2, list all the unique gametes that could be produced.

A.   R  

B.   R & r  

C.   r  

USE THE INFORMATION IN #1 - #3 ABOVE TO SOLVE THIS PROBLEM:

1. If you cross a homozygous red-fruited plant with a yellow-fruited plant, what is the appearance (phenotypes) and genotypes of the F<sub>1</sub> generation ?