

Period _____

Name _____

Date _____

Directions: Be neat. Complete the genetic trihybrid cross as indicated by the question. This paper and the attached pages are to be turned in stapled together in numerical order. Pages 4 & 5 have information which may help you solve the problem.

Problem: In humans albinism, extra digits, and fused fingers are inherited traits. Locate the information in the attached pages related to the inheritance of these traits and work the following problem. Use the large Punnett square for the F_2 generation.

A woman with extra fingers, normal pigmentation of the skin, and fused fingers has children to a man who is an albino, with normal fingers and the proper number of digits. An extensive study of the woman's family indicates that she is homozygous for the three traits. The couple had five children all of whom were placed in foster homes in various states including Alaska. Assume he is homozygous for all 3

The family does not have any way to keep in touch and most of the children do not know anything about their siblings in other parts of the country. By chance, one of the girls named Joan goes to UCLA and meets, falls in love, and marries Alan. Both individuals wish to have a family and consult a family genetic counselor who discovers that Joan and Alan are brother and sister. What are the expected genotypic and phenotypic ratios they can expect for the progeny they might have if they do have children? traits as well

Place your answers in the space at the bottom of this paper and on the second sheet of paper as indicated.

F_2 P: _____ X _____

F_2 G: _____ X _____

Genotypes F_2

♂/♀

[illegible]