Fundamentals of Biology I
BLOOD TYPING PROBLEMS
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Case #1 - (4 points) In 1944 Charlie Chaplin was involved in a legal battle over the paternity of a child born to Joan Barry. You have blood samples from Mr. Chaplin, Miss Barry and Miss Barry's infant. Determine the blood type of each and whether Mr. Chaplin should be responsible for child support.

Case #2 - (11 points) You want to determine the percentage of a couple's children who would be expected to have type AB blood. You have blood samples from the woman, her two parents, the man and his two parents. What percentage of the children might be expected to have type AB blood?

Case #3 - (7 points) You are brought in to settle a paternity dispute. A woman claims that any one of four men could be the father of her child. You take blood samples from the woman, her child and each of the four men. Which men can be ruled out as the father?

Case #4 - (6 points) A woman is married for the second time. You have a blood sample from the first husband and from the child of that marriage. You also have blood from her new husband and their child. You don't have a sample of the woman's blood. From the samples you have what is the woman's blood type? Can you determine her genotype?

Case #5 - (4 points) You have a blood sample from a woman, her daughter and her son. What is the blood type and genotype of the father?

Case #6 - (8 points) You have blood samples from six children in a family. What are the blood types of the parents?
BLOOD TYPING CASE #1

Charlie Chaplin

x

Joan Barry

Blood Type __________

Joan Barry’s child

Blood Type _________

Blood Type __________
BLOOD TYPING CASE #2

Parents

X

Blood type (mother)  Blood type (father)  Blood type (mother)  Blood type (father)

Wife  Husband

Blood Type  Couple

1  2  3  4

Child #1  Child #3

Blood Type  Blood Type

Child #2  Child #4

Blood Type  Blood Type
BLOOD TYPING CASE #3

Man #1
Blood type ______

Man #2
Blood type ______

Woman
Blood type
________

X

Man #3
Blood type
________

Child
Blood type
________

Man #4
Blood type
________
BLOOD TYPING CASE #4

First Husband
Blood type ______

Child w/First Husband
Blood type ______

Woman’s
Blood type ______

X

Second Husband
Blood type _____

Child w/ Second Husband
Blood type ______
BLOOD TYPING CASE #5

PARENTS

Woman
Blood type _______

Husband
Blood type _______

X

Daughter
Blood Type _______

Son
Blood Type _______
BLOOD TYPING CASE #6

Parents

Blood type _______        Blood type _______

Children

1  2  3  4  5  6

Child #1                                Child #3                                    Child #5
Blood type _____                  Blood type ______                  Blood type _____

Child #2                               Child #4                             Child #6
Blood type ______              Blood type _____                    Blood type _____