Genetics Worksheet

Part 1 Introduction:

1. Describe the genotypes given (use your notes). The first two are already done.

A.	DD *homozygous, dominant*	D.	ss _____
B.	Dd *heterozygous*	E.	Yy _____
C.	dd _____	F.	WW _____

2. In humans, brown eye color (B), is dominant over blue eye color (b). What are the **phenotypes** of the following genotypes? In other words, what color eyes will they have?
   A. BB _____
   B. bb _____
   C. Bb _____

The Five (5) Steps Associated With Solving a Genetics Problem:

If you take the time to follow the directions below, you will be able to solve most genetics problems.

1. **Determine** the **genotypes** of the parents or whatever is given in

Try to identify the genotypes of all of the individuals above.

1. Is this trait dominant or recessive? Explain your answer.

2. Could you have known the genotype of II-3 and II-4 [illegible] parental gametes

ents the possible combinations that could occur during

pic ratio of the offspring.
rmine the phenotypic ratio for the offspring.

er, it is a practice problem)

e is crossed with a red eyed, female mouse. Predict the

nts. The male parent is **heterozygous** which means he has
for red eyes. Since his eyes are black, this means that
red allele. So the male parents genotype is **"Bb"** (B =
eye).
is only one way to have this recessive phenotype, so she
mozygous recessive means that her genotype must be
nts is **Bb x bb.**

3. **Fill in** the squares. This repres
   fertilization.
4. **Write out** the possible **genoty**
5. **Using** the **genotypic** ratio dete

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Part 2: Sample Problem (Just read this ov

A heterozygous male, black eyed mou
possible offspring!

Step 1: **Determine the genotype of the par**
one allele for black eyes and one allel
black allele must be dominant over th
allele for black eye, b = allele for red
The female parent has red eyes, there
must to be homozygous recessive. Ho
"bb". Therefore, genotype of the pare