

Name _____

Biology 102, Spring 2008

Sec. # _____

Lab 7: Genetics

Answer the following questions in your OWN words and in COMPLETE sentences.

1. (2 pts) Hereditary units are called _____ and they are precise nucleotide sequences that code for specific proteins. They can exist in more than one form; these forms are called _____. The dominant allele masks the expression of the _____ allele. The outward expression of an individual's genes is called _____.

2. (2 pts) Curly hair is dominant to straight. Suppose a man with straight hair marries a woman with curly hair.

In the table below, write down possible genotypes for these two people.

	Phenotype	Possible Genotypes
Woman		
Man		

Using Punnett squares, determine the expected phenotypic and genotypic ratios of their children and record them in the table below.

Possible crosses		
Phenotypic ratio		
Genotypic ratio		

3. (2 pts) What is genetic counseling? You can use Google for finding out about it. Summarize your findings in one short paragraph.

4. (2 pts) Paternity suit: A woman goes to court to sue a man she believes to be the father of her child. Blood types are determined for the woman, the man, and the child.

	Blood Type	Possible Genotypes
Woman	AB	
Man	O	
Child	AB	

Is it likely that this man fathered the woman's child? Write down all the possible genotypes for the woman, the man, and the child and explain your reasoning.

5. (2 pts) Next time in the lab we will be doing the DNA Technology and Forensic Analysis lab. Before coming to class read pages 105-120 and visit the website shown below. Using the information in your lab manual and at the website, explain what is meant by DNA fingerprinting and what it can be used for in one paragraph.

http://www.accessexcellence.org/RC/AB/BA/DNA_Fingerprinting_Basics.html