

## Dry Lab #2 Questions.

The following is the base sequence on one strand of DNA:

CACGTGGACTGAGGACTCCTC

1. What is the sequence of bases on the complementary DNA strand?

GTG CAC CTG ACT CCT GAG GAG

2. What mRNA would be read from the original DNA strand?

GUG|CAC|CUG|ACU|CCU|GAG|GAG

3. What protein fragment would this mRNA code for?

valine | histidine | leucine | threonine | proline | glutamic acid

5. If the 17th nucleotide in the original DNA strand were changed from T to A, what mRNA would the new DNA code for?

GUG|CAC|CUG|ACU|CCU|GUG|GAG

6. What protein would this mRNA code for?

\* missense \* base substitution  
valine | histidine | leucine | threonine | proline | valine ...  
... glutamic acid

8. How are the proteins in #4 and #6 different?

In #6, valine is substituted for glutamic acid as the second last amino acid.