Name _____ Date _____ Period _____

Protein Synthesis
"What Happens when DNA Is Mutated"

Initial DNA Sequence (always refer to this sequence when starting a new problem)

G A T T A C T G A G G A T C G G A A T A C T T C A G C T C T T A G C A T T G C A T T

1. To understand what happens under normal condition, transcribe this DNA strand into its mRNA.

mRNA =

Using this newly made mRNA, translate it into its corresponding protein fragment. Don't forget to look for start and stop codons.

protein fragment =

2. Referring to the original DNA strand, change the 29th base from cytosine to adenine.

mRNA =

protein fragment =

What happened?

3. Referring to the original DNA strand, change the 9th base from adenine to cytosine.

mRNA =

protein fragment =

What happened?

4. Referring to the original DNA strand, insert thymine between the 3rd and 4th base.

mRNA =

protein fragment =

What happened?