# VLA Basic Biology: Unit 17 Worksheet

Name:_____

## A. Select the mutation that best matches the description given.

                    A. Deletion           B. Insertion           C. Point Mutation

1. _____ Involves a change of a single nucleotide.

2. _____ Involves a nucleotide that has been removed from the DNA sequence.

3. _____ Involves a nucleotide that is added into the DNA sequence.

## B. State what nitrogenous base is mutated from the following sequences:

|  | Original Sequence | Mutated Sequence | Mutated Base? |
|---|---|---|---|
| **Point Mutation** | **C-G-C-T-A** | **C-G-G-T-A** |  |
| **Insertion** | **C-G-C-T-A** | **C-G-A-C-T-A** |  |
| **Deletion** | **C-G-C-T-A** | **C-G-T-A** |  |

## C. Select the mutation that best matches the description given.

              A. Silent           B. Missense         C. Frameshift      D. Nonsense

1. _____ A DNA mutation that changes one codon to a stop codon.

2. _____ A DNA mutation that has no effect on a gene's function or amino acid coding.

3. _____ A DNA mutation that shifts the entire DNA sequence from the point of the mutation forward.

4. _____ A DNA mutation that changes one codon to code for a different amino acid.

5. _____ The DNA mutated and now codes for stop.

6. _____ The DNA mutated and now codes for the same amino acid as it did before the mutation.

7. _____ The DNA mutated and now codes for only one different amino acid.

8. _____ The DNA mutated and now the entire sequence codes for different amino acids from the point of the mutation onward.