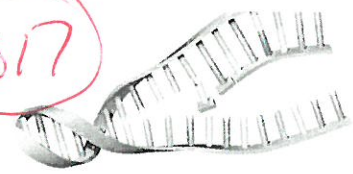


Key 2017



Original DNA Sequence:	T A C A T G A C G G C A T C G A C T ...
mRNA Sequence:	A U G U A C U G C C G U A G C U G A
Amino Acid Sequence:	met Tyr Cys Arg Ser Stop

Mutated DNA Sequence #1	T A C A T <u>A</u> A C G G C A T C G A C T ...
What's the mRNA sequence?	A U G U A U U G C C G U A G C U G A (Circle the change)
What will be the amino acid sequence?	met - Tyr - Cys - Arg - Ser - Stop
Will there likely be effects?	None
What type of mutation is this?	substitution (Point)

Mutated DNA Sequence #2	T A C A T G A C G G C A T C G A T ...
What's the mRNA sequence?	A U G U A C U G C C G U A G C U A (Circle the change)
What will be the amino acid sequence?	met - Tyr - Cys - Arg - Ser
Will there likely be effects?	No stop
What type of mutation is this?	Deletion (Frameshift)

Mutated DNA Sequence #3	T A C A T <u>C</u> G A C G G C A T C G A C T ...
What's the mRNA sequence?	A U G U A G C U G C C G U A G C U G A (Circle the change)
What will be the amino acid sequence?	met - stop
Will there likely be effects?	Premature stop
What type of mutation is this?	Insertion (Frameshift)

Mutated DNA Sequence #4	T A C A T G A C G G C A T <u>A</u> G A C T ...
What's the mRNA sequence?	A U G U A C U G C C G U A U C U G A (Circle the change)
What will be the amino acid sequence?	met - Tyr - Cys - Arg - <u>Ile</u> - stop
Will there likely be effects?	change! amino acids
What type of mutation is this?	substitution (Point)

Mutated DNA Sequence #5	T A C A T G A C G <u>G</u> C A T C G A C T ...
What's the mRNA sequence?	A U G U A C U G C G U A G C U G A (Circle the change)
What will be the amino acid sequence?	met - Tyr - Cys - Val - Ala
Will there likely be effects?	All amino acid after mutation changed!
What type of mutation is this?	Deletion (Frame shift)