Gene mutations

Fill in the blank with the following types of gene mutations: frameshift insertion, frameshift deletion, substitution.

DNA — mRNA — Amino acids: Phe, Tyr, Glu, Glu

Normal (unmutated)

DNA — mRNA — Amino acids: Phe, Tyr, Lys, Glu

DNA — mRNA — Amino acids: Phe, Tyr, Gly, Arg

DNA — mRNA — Amino acids: Phe, Thr, Lys, Arg
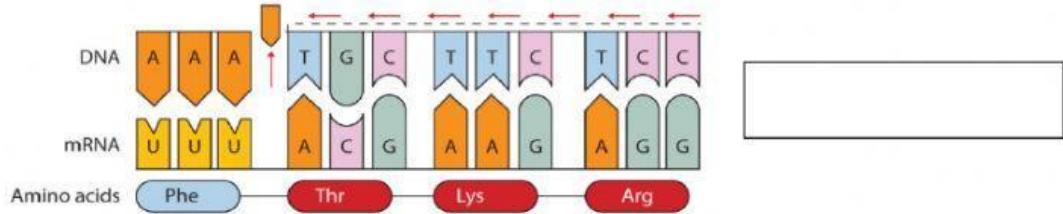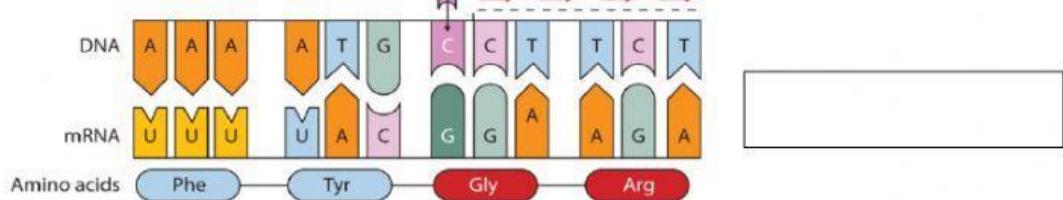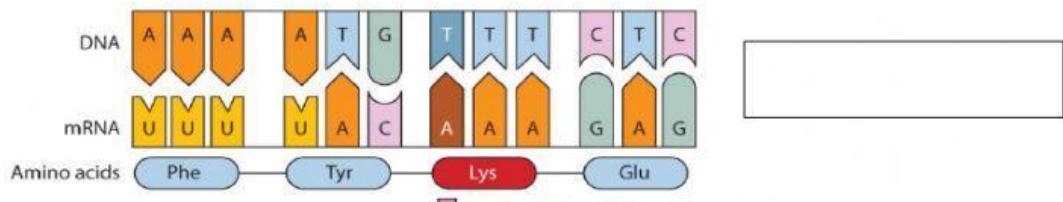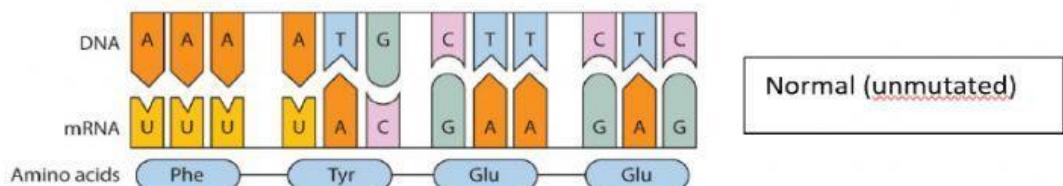
The following diagrams show three types of point mutations. In the boxes – identify if the mutated strand is a missense, nonsense or silent point mutation.

G A U G C C G U A U U A C G U A C C U U A A U C G...
Met Pro Tyr Tyr Val Pro STOP

Original strand

G A U G C C G U A U U A C G U U C C U U A A U C G...
Met Pro Tyr Tyr Val Pro STOP

G A U G U C G U A U U A C G U A C C U U A A U C G...
Met Ser Tyr Tyr Val Pro STOP

G A U G C C G U A U U A A G U A C C U U A A U C G...
Met Pro Tyr STOP