DNA Mutations

Label the mutations as the correct name. Place a star next to the mutations that result in a frameshift mutation.

Chromosome mutation: deletion	Chromosome mutation: inversion	Chromosome mutation: duplication	Chromosome mutation: translocation
Point mutation: substitution	Point mutation: deletion	Point mutation: insertion	

1. Original DNA strand: TAC GCG AAT TCA AAG
   Mutated DNA strand: TAC GGG AAT TCA AAG _____

2. Original DNA strand: AGG TTG GGC AAA TTT
   Mutated DNA strand: AGG TTG GGC TTT _____

3. Original DNA strand: TTC AAG GGT TAT CGC
   Mutated DNA strand: TTC GAA GGT TAT CGC _____

4. Original DNA strand: TAC GCG CCC TTT AAA
   Mutated DNA strand: TCG CGC CCT TTA AA _____

5. Original DNA strand: CCT TGT GGA AAC CGC
   Mutated DNA strand: CCT TGT TGT GGA AAC CGC _____

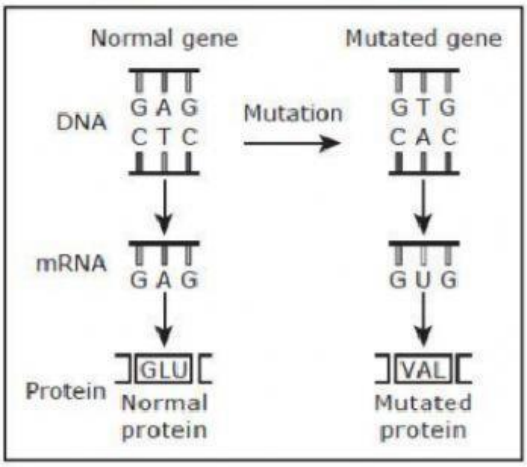
6. Original DNA strand: TAG CAT TAC ACT GAC
   Mutated DNA strand: TAG CAT TAC ACT GAC TTT _____

7. Original DNA strand: AAA GTA CCT TAC CAT
   Mutated DNA strand: AAA GCT ACC TTA CCA T _____

LIVEWORKSHEETS

52 A certain mutation in the gene for hemoglobin results in the red blood cells becoming sticky, rigid, and irregularly shaped. These irregularly shaped red blood cells block the flow of blood throughout the body. A single base mutation is responsible for these irregularly shaped blood cells.

Hemoglobin Gene Mutation



Which of these mutations most likely results in the mutated hemoglobin gene?

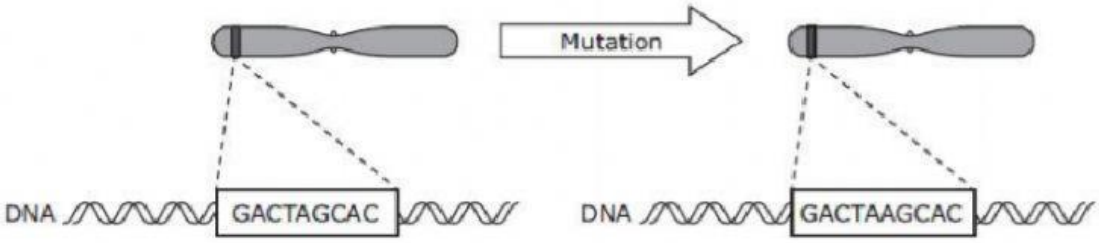
F Insertion

G Deletion

H Duplication

J Substitution

2 Different types of mutations can occur in DNA. The diagram represents a type of mutation.



Which statement describes the mutation in the diagram?

F A silent mutation results in the insertion of a different amino acid.

G A substitution occurs with the adenine base.

H A deletion of a cytosine base occurs.

J A base is inserted into one strand of the DNA.

LIVEWORKSHEETS