

KEY.

Central Dogma

State the start mRNA codon	State the three stop mRNA codons		
AUG	UAA	UAG	UGA

Template DNA Strand:	3'-GTACGATGCCTAAATCGGC-5'
DNA Complementary (antisense) Strand:	5'-CATGCTACGGATTAGCCG-3'

Template DNA Strand:	3'-ATTAAGCGATATGCTTAAGCCT-5'
DNA Complementary (antisense) Strand:	5'-TAATTCGCTATACGAATTCGGA-3'

Template DNA Strand:	3'-ATCGGATCTACGTAGATCTTAG-5'
mRNA Complementary:	5'-UAGCCUAG AUGCAUCUAGAAUC-
↳ use "U" instead of "T"	
Template DNA Strand:	3'-ATGGCATAACTTGCTAGCATCGA-5'
mRNA Complementary:	5'-UACCGUAUUGAACGAUCGUAGCU-3'

Template DNA Strand:	3'-TACAGAAAAGCCTCATCCCCACCC-5'
mRNA Complementary:	5'-AUGUCUuuu CGGAGU AGGGGU GGG-3'

Amino acid sequence: Met-Ser-Phe-Arg-Ser-Arg-Gly-Gly

Template DNA Strand:	3'-TACTGATTCCTAUCAAAAGAACG-5'
mRNA Complementary:	5'-AUGACUAAGGAUAGUUUUUCUUGC-3'
Amino acid sequence:	Met-Thr-Lys-Asp-Ser-Phe-Ser-Cys.

*find "start" AUG first

Template DNA Strand: 3'-TAC ATACACCTTAAC GTAGTT TGG-5'

mRNA Complementary: 5'-AUGUAUGUGGAAUUGCAUCAAACC-3'

Amino acid sequence: Met-Tyr-Val-Gly-Leu-His-Gln-Thr

Template DNA Strand: 3'-TACTGAATAGTAGCACCAAAAACAAGAAATT-5'

mRNA Complementary: 5'-AUGACUUAUCAUCGUGGUUUUUUGUUCUUA-3'

Amino acid sequence: Met-Thr-Tyr-His-Arg-Gly-Phe-Cys-Ser-Stop

Template DNA Strand: 3'-TACAGGGCAGAACCAATAACAGGACCA-5'

mRNA Complementary: 5'-AUG-UCCEGUCUUGGUUAUUUGUCCUGGU-3'

Amino acid sequence: Met-Ser-Arg-Leu-Gly-Tyr-Cys-Pro-Gly

Template DNA Strand: 3'-CTACTTCCAGCAGGAACA-5'

mRNA Complementary: 5'-GAUGAAGGUCCGUCCUUGU-3'

Amino acid sequence: Asp-Glu-Gly-Arg-Pro-Cys

Template DNA Strand: 3'-GATACCGAATGCCAACTCACCCCAA-5'

mRNA Complementary: 5'-CUAUGGCUAACGGUUGAGUGGGGUUU-3'

Amino acid sequence: Met-Ala-Tyr-Gly-Stop

Template DNA Strand: 3'-CAATACCGACTAAAAATAGCAACTCTT-5'

mRNA Complementary: 5'-GUUAUGGCUGAUUUUUUAUUGUUGAGAA-3'

Amino acid sequence: Met-Ala-Asp-Phe-Tyr-Arg-Stop

*you can choose which sequence to use, so you may have different answers

*can't start building amino acids until we have a start codon 'AUG'