Name:_____

GENE EXPRESSION

Complete the strand of DNA by writing the pairing nucleotide. The first line will be the matching DNA strand, the second line will be the RNA strand that matches THE INITIAL DNA STRAND. Finally use the box of Amino Acids to build a protein. Remember, the Amino Acids are based on the OPPOSITE of the RNA strand. If you have a combination that says "stop" then the protein stops, and so do you. Each strand of DNA and RNA is 27 nucleotides long.

First Position	Second Position: U				Second Position: C				Second Position: A				Second Position: G				Third Position
	code	Amio Acid			code	Amio Acid			code	Amio Acid			code	Amio Acid			
U	UUU	phe			UCU	ser			UAU	tyr			UGU	cys			U
	UUC				UCC				UAC				UGC				C
	UUA	leu			UCA				UAA	STOP			UGA	STOP			A
	UUG				UCG				UAG	STOP			UGG	trp			G
C	CUU	leu			CCU	pro			CAU	his			CGU	arg			U
	CUC				CCC				CAC				CGC				C
	CUA				CCA				CAA	gln			CGA				A
	CUG				CCG				CAG				CGG				G
A	AUU	ile			ACU	thr			AAU	asn			AGU	ser			U
	AUC				ACC				AAC				AGC				C
	AUA				ACA				AAA	lys			AGA	arg			A
	AUG	met			ACG				AAG				AGG				G
G	GUU	val			GCU	ala			GAU	asp			GGU	gly			U
	GUC				GCC				GAC				GGC				C
	GUA				GCA				GAA	glu			GGA				A
	GUG				GCG				GAG				GGG				G

1.)

DNA 1: T A C G A A G G T T G C T C T T C A C C G T C C A C T

DNA 2:_____

RNA: _____

Amino Acids: _____

2.)

DNA 1: T A C C A G C G A C T A C T T A C C A A A A T G A T T

DNA 2:_____

RNA: _____

Amino Acids: _____

3.)

DNA 1: _____ A T G G A T _____ G G G C A C _____

DNA 2: T A C _____ T T A T C G G C A _____ A T C

RNA: _____

Amino Acids: _____

4.)

DNA 1: A C G C C A T A C T T

DNA 2: T A C G A C A T G C T

RNA: U G U C C A A

Amino Acids: _____

5.)

DNA 1: A T G T C T G G T A A

DNA 2: G G A T T A C T T

RNA: U A A A G A C

Amino Acids: _____