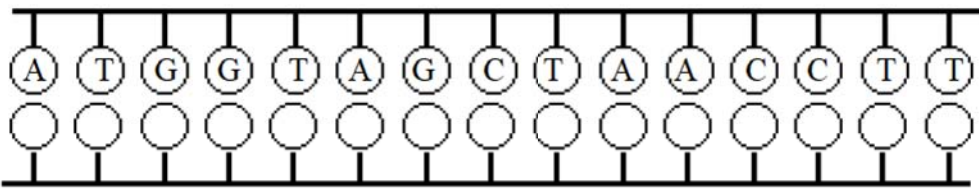
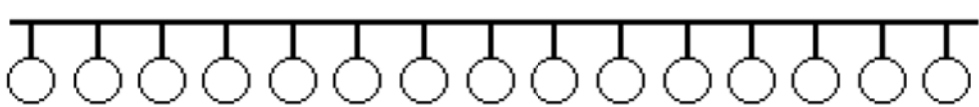



## Protein Synthesis Worksheet


Directions:

- 1<sup>st</sup> Fill in the complimentary DNA strand using DNA base pairing rules.
- 2<sup>nd</sup> Fill in the correct mRNA bases by transcribing the bottom DNA code.
- 3<sup>rd</sup> Translate the mRNA codons and find the correct amino acid using the Codon Table
- 4<sup>th</sup> Write in the amino acid and the correct anti-codon the tRNA molecule.
- 5<sup>th</sup> The answer to the questions about protein synthesis below the amino acids.

1.  **DNA**

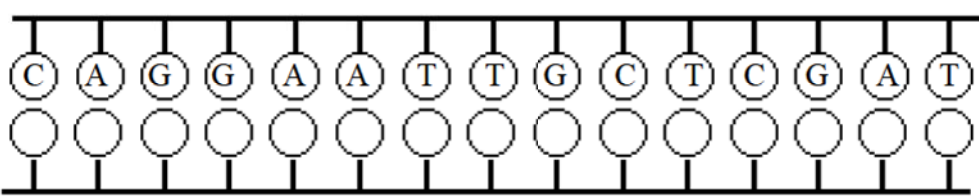
2.  **mRNA**

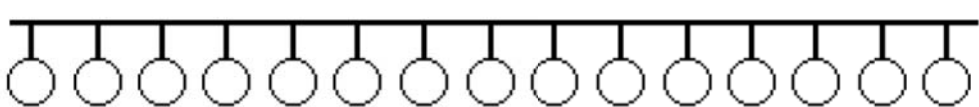
3.  **tRNA**

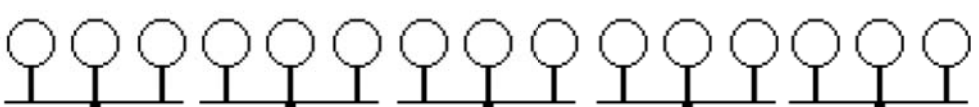
4.  **Amino Acids**


5. mRNA is synthesized in translation or transcription?

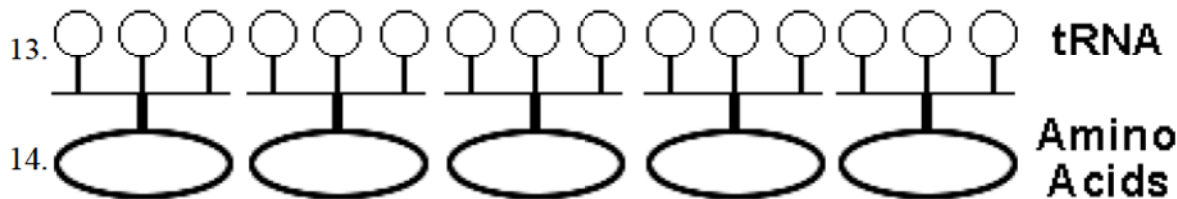
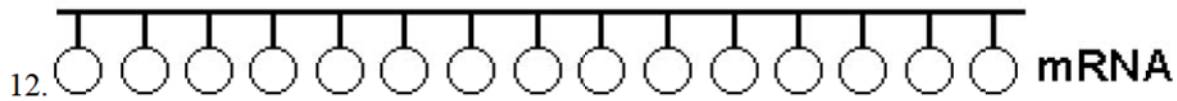
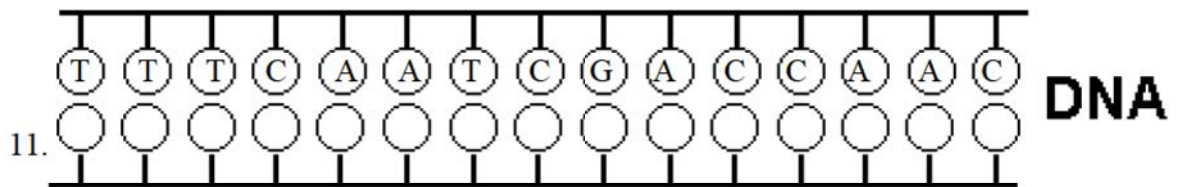
6. mRNA has codons or anti-codons?

7.  **DNA**

8.  **mRNA**

9.  **tRNA**

10.  **Amino Acids**



15. 1 or 3 codons equal one amino acid?

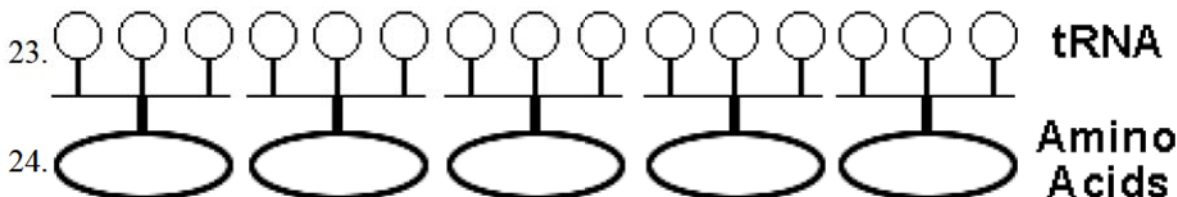
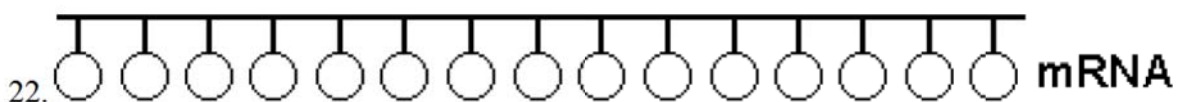
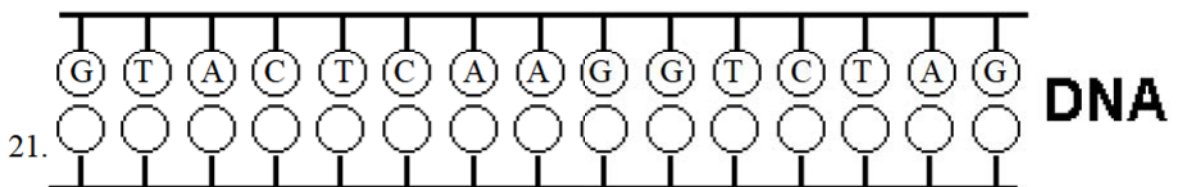
16. tRNA brings amino acids to the nucleus or ribosome?

17. A polypeptide is a sequence of proteins or amino acids?

18. tRNA has codons or anti-codons?

19. tRNA transfers amino acids during translation or transcription?

20. Ribosomes are the site where translation or transcription takes place?



## CODON TABLE

<b>1 s t  B a s e</b>	<b>U</b>	Phenylalanine	Serine	Tyrosine	Cysteine	<b>U C A G</b>
		Phenylalanine	Serine	Tyrosine	Cysteine	
		Leucine	Serine	Stop	Stop	
		Leucine	Serine	Stop	Tryptophan	
	<b>C</b>	Leucine	Proline	Histidine	Arginine	<b>U C A G</b>
		Leucine	Proline	Histidine	Arginine	
		Leucine	Proline	Glutamine	Arginine	
		Leucine	Proline	Glutamine	Arginine	
	<b>A</b>	Isoleucine	Threonine	Asparagine	Serine	<b>U C A G</b>
		Isoleucine	Threonine	Asparagine	Serine	
		Isoleucine	Threonine	Lysine	Arginine	
		Methionine	Threonine	Lysine	Arginine	
	<b>G</b>	Valine	Alanine	Aspartic acid	Glycine	<b>U C A G</b>
		Valine	Alanine	Aspartic acid	Glycine	
		Valine	Alanine	Glutamic acid	Glycine	
		Valine	Alanine	Glutamic acid	Glycine	
		<b>U</b>	<b>C</b>	<b>A</b>	<b>G</b>	
		<b>2nd Base</b>				