MIT Translation Class Notes

Name _____

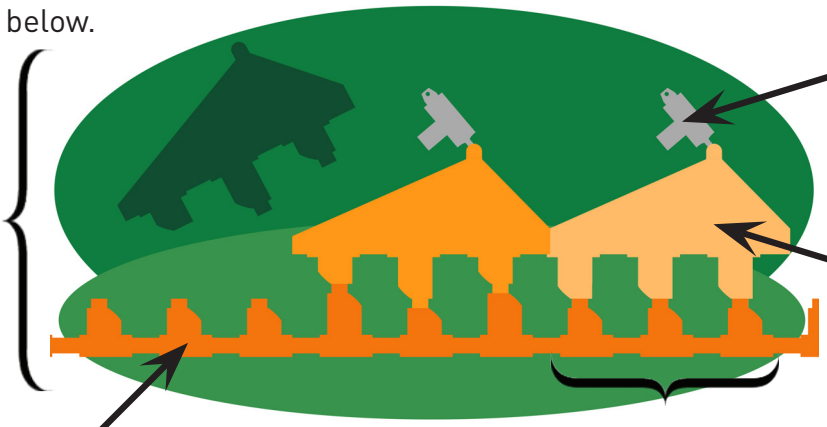
Date _____

Class _____

To be completed in class using tRNA Booklet 1 (pages 10-36).

In translation, the mRNA is read to produce a protein.

1. Label the diagram below.



ribosome
Organelle that helps build proteins

amino acid
Small molecule

tRNA
Transports amino acids

mRNA
Long strand of nucleotides

codon
Group of 3 nucleotides

2. What organelle in the cell helps build proteins? **ribosome**

3. What part of the tRNA binds to the mRNA codon? **anticodon**

4. What 3 mRNA nucleotides are always in the "Start" position? **A U G**

5. What happens at the STOP codon? (See page 22.) **A release factor protein binds to the STOP codon and all the molecules are released from the ribosome.**

6. First, write in one correct mRNA codon for valine (Val) and arginine (Arg) in the chart below. (See page 35 or 36.) Then, write in the tRNA anticodon that would base pair with each mRNA codon.

Amino Acid	Methionine	Valine	Arginine	STOP
mRNA Codon	A U G	**GUU** **GUC** **GUA** **GUG**	**CGU** **CGC** **CGA** **CGG**	U A G
tRNA Anticodon	U A C	**CAA** **CAG** **CAU** **CAC**	**GCA** **GCG** **GCU** **GCC**	A U C

Valine and arginine each have 4 possible codons and anticodons. Students pick a single codon and its corresponding anticodon for each amino acid. Multiple correct answers are shown.