Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ Mods:\_\_\_\_

**DNA to Protein Review**

**Read/Watch chapter 9 and/or use your notes to answer the following questions.**

1. What are the ABBREVIATED names of the 4 **RNA** nucleotides? \_\_\_\_ \_\_\_\_ \_\_\_\_ \_\_\_\_
2. List the three types of RNA. **CIRCLE** the one that is **formed during the process of transcription**

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1. Protein synthesis means “protein building”. What is the name of the **monomers that make up a protein**? (HINT: two words and they both start with the letter “a”) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. The process where DNA code is converted into an mRNA code is called
3. Replication B. Transcription C. Translation D. Abomination
4. The process where mRNA code is converted into an amino acid sequence (an eventual protein) is called
5. Replication B. Transcription C. Translation D. Evaporation
6. The process where rRNA and tRNA are responsible for the assembly of protein is called

A. Replication B. Transcription C. Translation D. Elation

1. The process where DNA code is converted into an mRNA code is called

A. Replication B. Transcription C. Translation D. Perspiration

1. This process occurs because DNA code cannot leave the nucleus to get to the “protein factories” called ribosomes.
2. Replication B. Transcription C. Translation D. One Nation
3. The DNA sequence CCG would be transcribed into the \_\_\_\_\_\_ sequence “\_\_\_\_\_\_\_”.

 A. mRNA, GGC B. mRNA, AAU C. tRNA, GGC D. tRNA, AAU

1. Which tRNA anticodon is complementary to the mRNA codon “CUA”?
2. GAT B. CAT C. AUC D. GAU
3. On which type of RNA is a sequence of 3 nucleotides referred to as a “codon”? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. R**eplicate** the following sequence of one strand of a DNA molecule by providing the complementary sequence of nucleotides that would be formed as the second stran: 5’ TACTTCCGGCATATT 3’

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. T**ranscribe** the following DNA sequence: 3’ TACTTCCGGCATATT 5’

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Use a codon chart to **translate** the DNA sequence from question 14 into the amino acid sequence:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **Replicate** the following sequence of one strand of a DNA molecule by providing the complementary sequence of nucleotides that would be formed as the second strand: 5’TACAACATGCGCATT 3’

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. T**ranscribe** the following DNA sequence: 3’ TACAACATGCGCATT 5’

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Use a codon chart to **translate** the DNA sequence from question 17 into the amino acid sequence:

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1. In your own words, **summarize the events** of transcription (must use the terms: DNA, mRNA, complementary, nucleus)

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1. In your own words, **summarize the events** of translation (must use the terms: mRNA, ribosome/rRNA, tRNA, complementary, codon, anticodon, amino acid)

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