Cell Reproduction: What is the role of DNA and RNA in Protein Synthesis

Directions: Complete the following questions based on the Cell Reproduction Virtual Lab. To get to the lab click on your 2X client app, then click Life science virtual labs, then click on the lab labeled Cell Reproduction.

1. What does DNA stand for?

2. The traits of an organism are determined by: 
   ____________________________________________
   ____________________________________________

3. What are the NAMES of the 4 nitrogen bases in DNA?

4. Which nitrogen bases bond with which (in DNA?)

5. What is an organism’s genetic code?

6. How many amino acids are there in the human body? ________________

7. What is a sequence of 3 bases called?

8. What are proteins?
9. Where are proteins made?

10. When is the message transcribed into messenger RNA?

11. What takes the place of thymine in messenger RNA? __________________________

12. A sequence of amino acids makes a __________________________

13. In translation __________________ RNA brings amino acids to ribosomes so they can be assembled into proteins.

Procedure: Follow the procedure on the left side of the screen (#1-9) and record your answers on the data table below, not in the virtual lab. To complete the table go through the procedure twice.

<table>
<thead>
<tr>
<th>Amino Acid #</th>
<th>DNA Code</th>
<th>mRNA Code</th>
<th>tRNA Code</th>
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14. What might happen if there were an extra nitrogen base in the middle of the mRNA code or if there were a nitrogen base deleted from the mRNA code?