

Directions

Answer the following questions about the nature of RNA.

1. Write out the full name for RNA. _____.
2. All organisms possess RNA. What is its purpose?
3. The basic chemical building blocks for nucleic acids are _____.
4. Name the three different types of RNA molecules and describe the role that each plays in a cell.
 - a)
 - b)
 - c)
5. Where in the eukaryotic cell are RNAs manufactured?
6. Where in a prokaryotic cell are RNAs manufactured?
7. List at least three ways that RNA differs from DNA.
 - a)
 - b)
 - c)
8. Find out how RNA and the nucleolus are related.

Directions

1. To better understand the process of gene expression and the production of proteins, finish drawing the amino acid chain that has been started for you. The diagram on the next page consists of a portion of a ribosome surface labeled rRNA, mRNA, tRNA, and a few of the 20 different amino acids. Three positions have already been completed for you. You are to finish the last four positions in the developing protein strand.
2. Color the ribosome green, the mRNA red, the tRNA yellow, and the amino acids blue. This will help you see the relationship between the role of each of these molecules and the production of a protein.
3. What type of molecule consists of a chain of amino acids held together by strong peptide bonds?

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Diagram Showing the Process of Protein Synthesis

