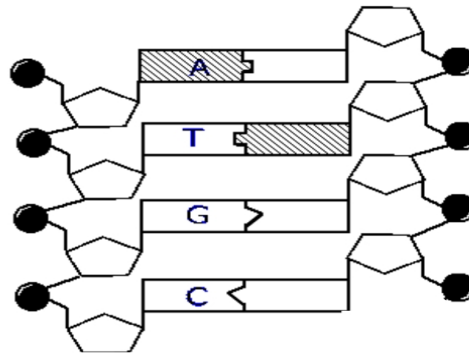


## DNA Structure, DNA Replication, and Protein Synthesis Review

1. A nucleotide is made of three parts: a \_\_\_\_\_ group, a five carbon \_\_\_\_\_, and a nitrogen containing \_\_\_\_\_.
2. In a single strand of DNA, the phosphate group binds to the \_\_\_\_\_ of the next group.
3. The 5' end of a single DNA strand contains a free \_\_\_\_\_, while the 3' end contains a free \_\_\_\_\_.
4. Purines have \_\_\_\_\_ rings, and pyrimidines have \_\_\_\_\_ ring.
5. Write out the complete name for DNA: \_\_\_\_\_

On the diagram:

- Label the 3' and 5' ends.
- Circle a nucleotide.
- Label the sugar and phosphate.
- Label the bases that are not already labeled.



6. The two sides of the DNA helix are held together by \_\_\_\_\_.
7. The purines are \_\_\_\_\_ and \_\_\_\_\_; the pyrimidines are \_\_\_\_\_ and \_\_\_\_\_.
8. The term used to describe how the two strands of DNA are oriented is \_\_\_\_\_, which means \_\_\_\_\_.
9. In a strand of DNA, the percentage of thymine is 30 %. What is the percentage of cytosine? \_\_\_\_\_ Adenine? \_\_\_\_\_ Thymine? \_\_\_\_\_