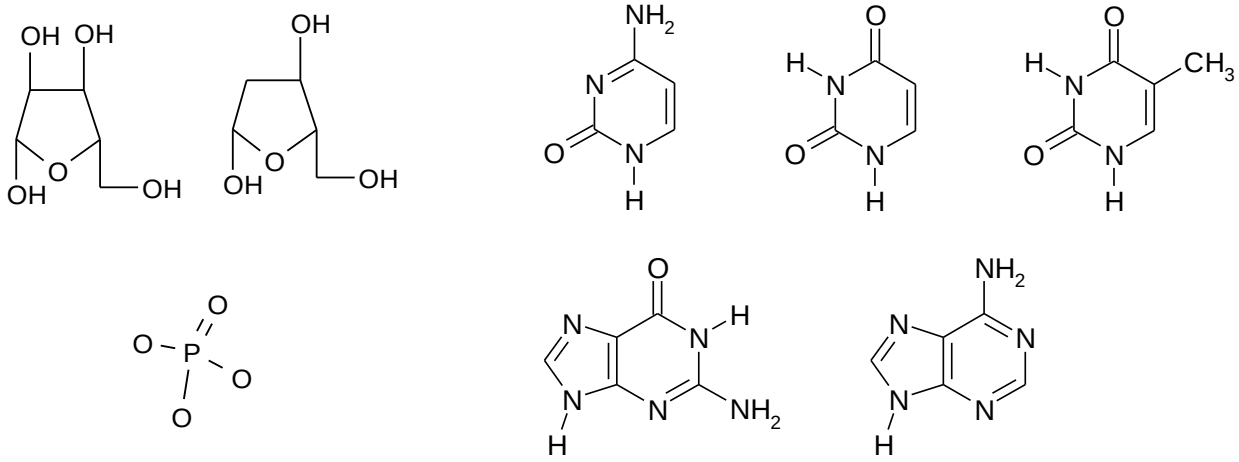
Nucleic acid work sheet Name/date_____

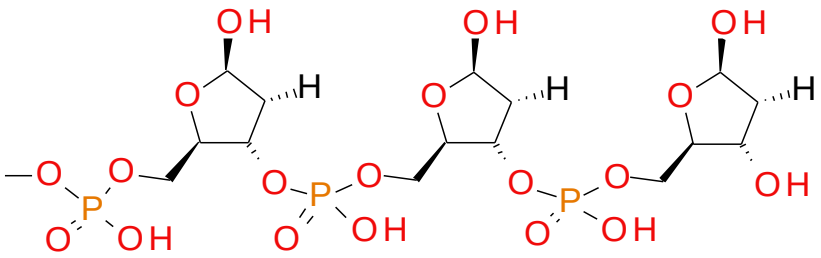
1. Label the following with their names and symbols.



2. Draw H-bonding that occurs between adenine-thymine and quanosine-cytidine

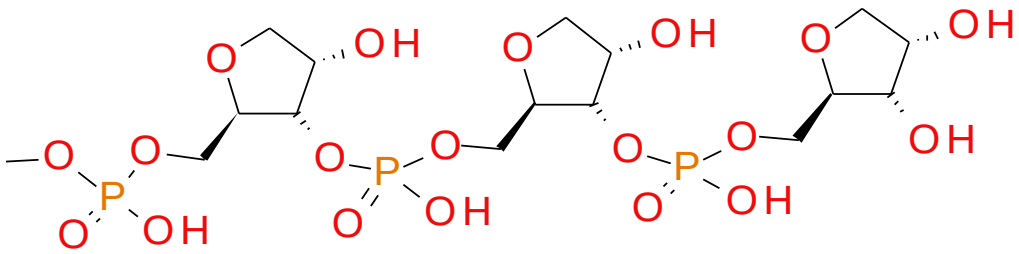
3. Draw and label the nucleotides dA, dG, dT, dC, A, G, T, C (the building blocks of DNA and RNA).

4. Label all the carbons on one of the 2-deoxy ribose.



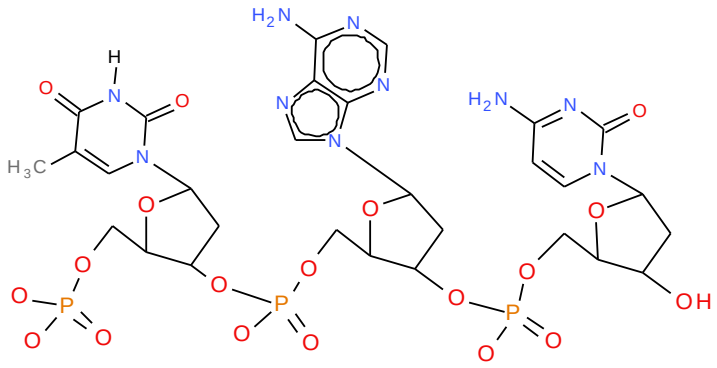
5’ end 3’ end

5. Add bases to each deoxy ribose and writte the symbol of the nucleotide under the structure.



6. Draw the backbone from the 5’ to 3’ ends and add bases in a different sequence from above.….

7. In the following segment of DNA, identify the following by circling one example of the item: deoxyribose, diphosphate ester bond, the 5’ end, the 3’ end



Define and name one nucleoside_____

Define and name one nucleotide _____

Write the letter sequence that denotes this DNA segment:

Write the letter sequence for the complementary strand (label the 5’ and 3’ ends):

Draw the complementary DNA strand showing hydrogen bonding between the base pairs.

8. For the following polypeptide sequence: -ala – pro – lys-

work backwards showing tRNA (clover leaf schematic) with the amino acid (by name) attached to the 3-OH end and the anticodon attached to the codon of the mRNA (use the genetic code in your book). Then write the DNA gene segment that this mRNA came from. Label the 5' and 3' ends of all the nucleic acid segments. Use symbols for this exercise (dA, dG, dT, dC, A, G, T, C), not chemical structures.