

P7 49

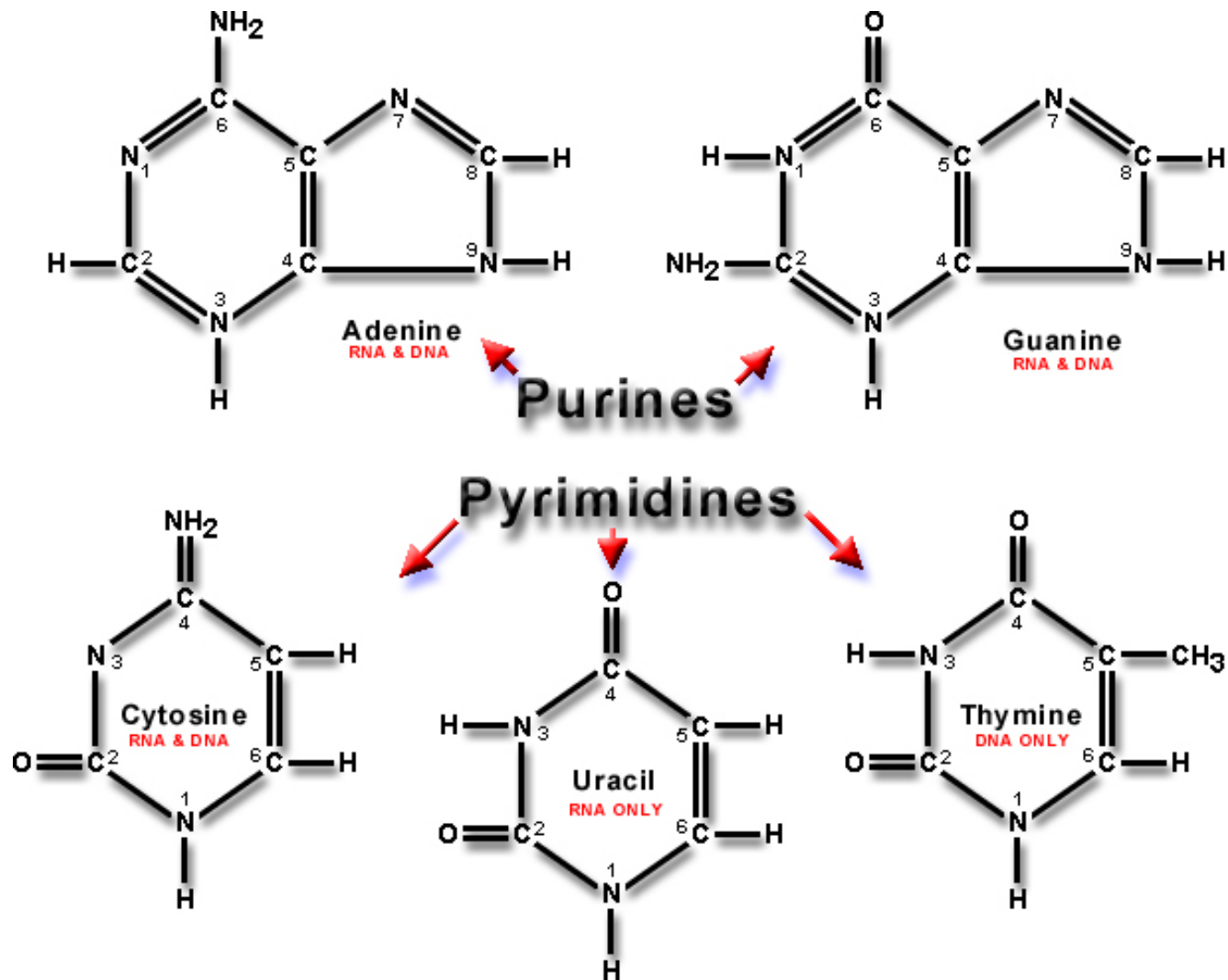
21.1 - 21.9 odd

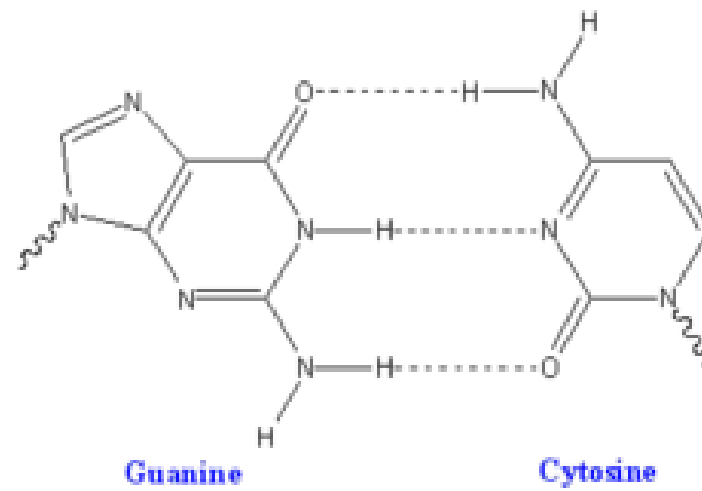
P7 50

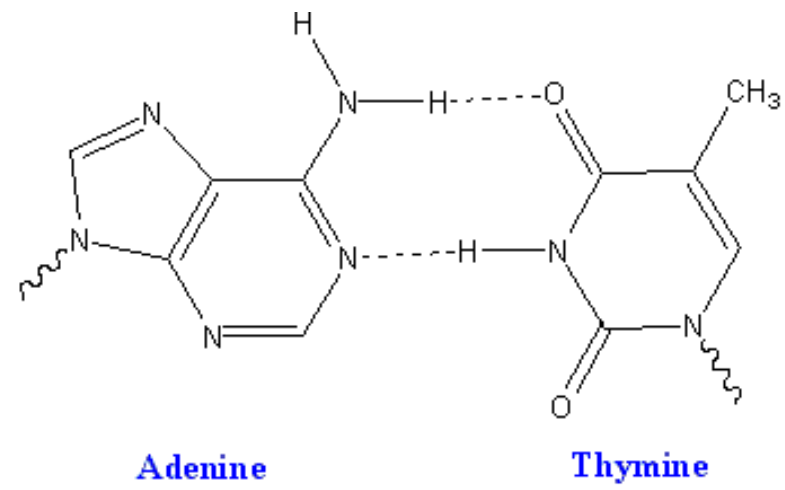
2.11, 2.13

P 754

21.17

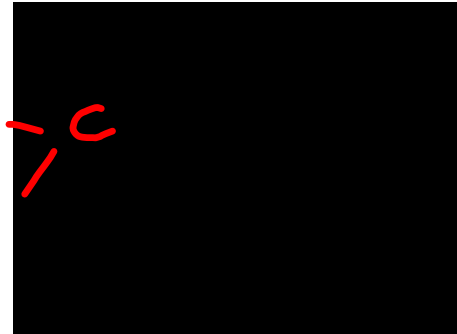






ribose sugar

RNA



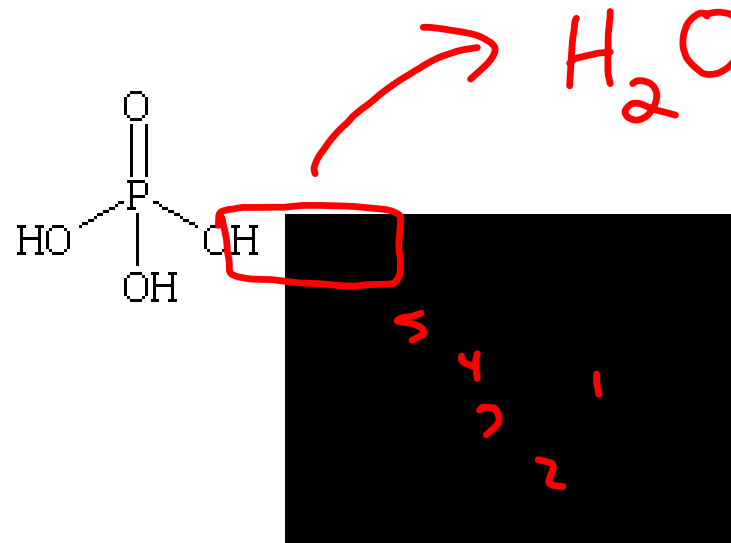
Deoxyribose sugar



DNA

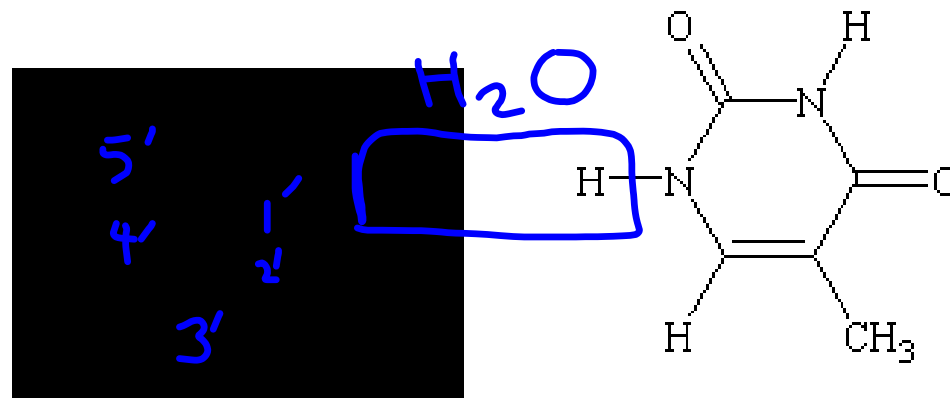
Nucleotides - from when the C 5' - OH group of the ribose or deoxyribose in a nucleoside forms a phosphate ester.

Phosphoric Acid and Ribose



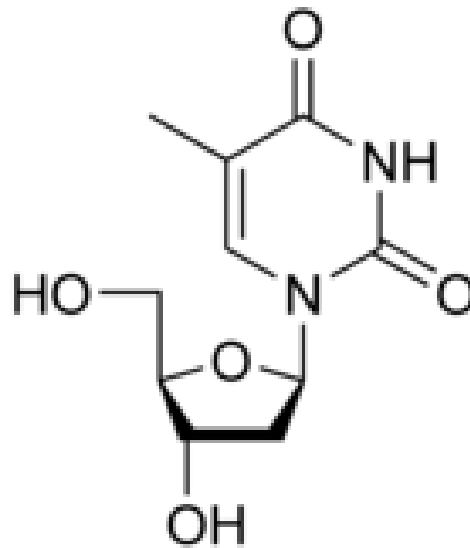
Nucleoside - produced when a pyrimidine or purine forms a glycoside bond to C 1' of a sugar, either a ribose or deoxyribose.

Ribose Linking with Uracil



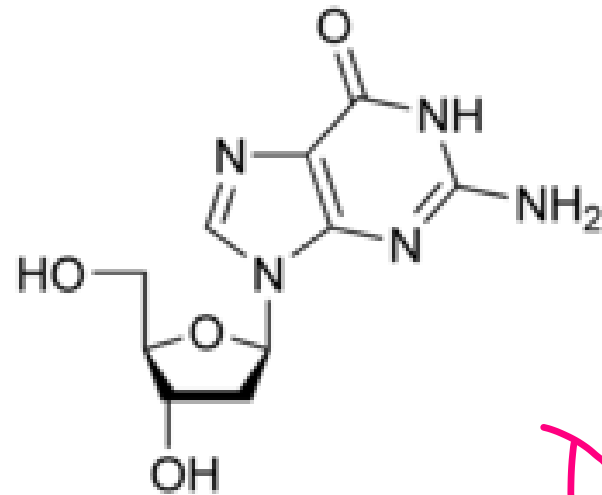
RNA

Deoxythymidine



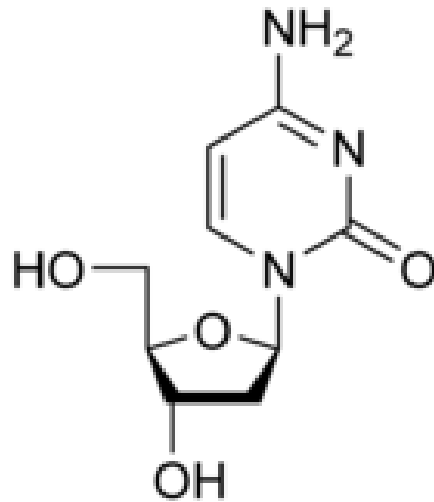
DNA

Deoxyguanosine



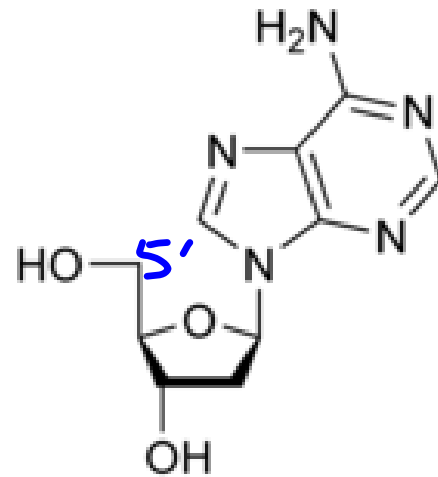
DNA

Deoxycytidine



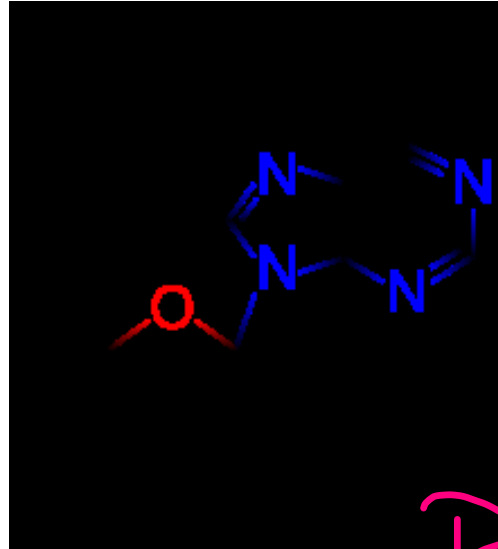
DNA

Deoxyadenosine



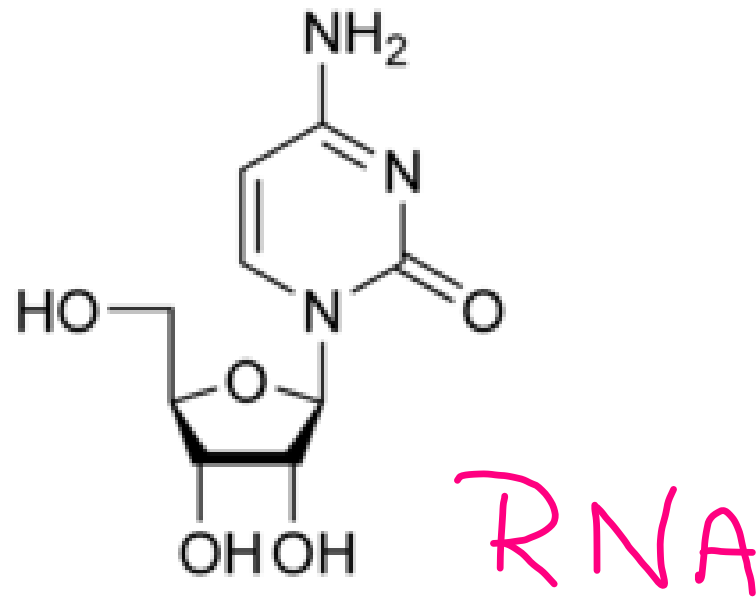
DNA

Adenosine

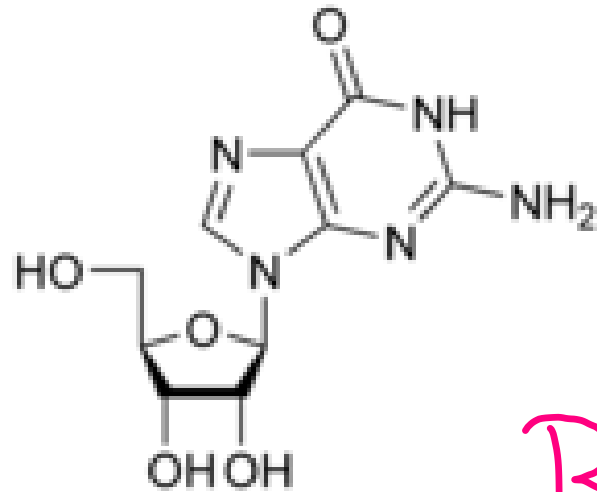


RNA

Cytidine

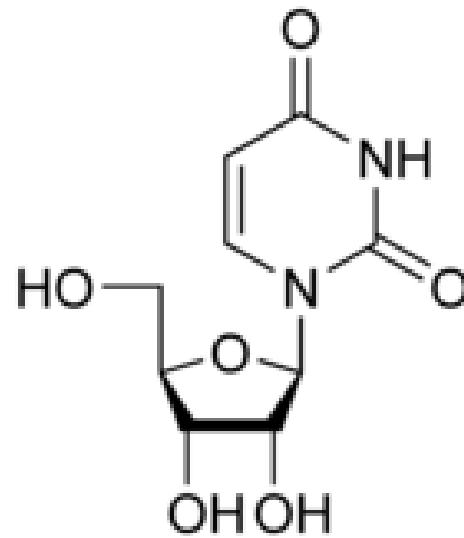


Guanosine

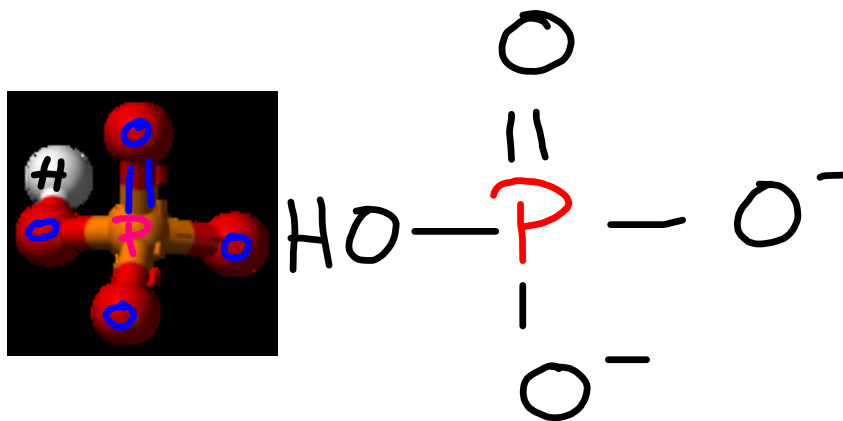


RNA

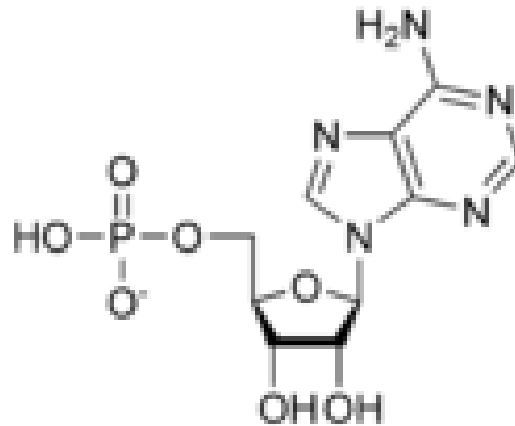
Uridine



RNA



Phosphate Group Adding On



nucleotide

base



sugar —

nucleotide



— phosphate — sugar

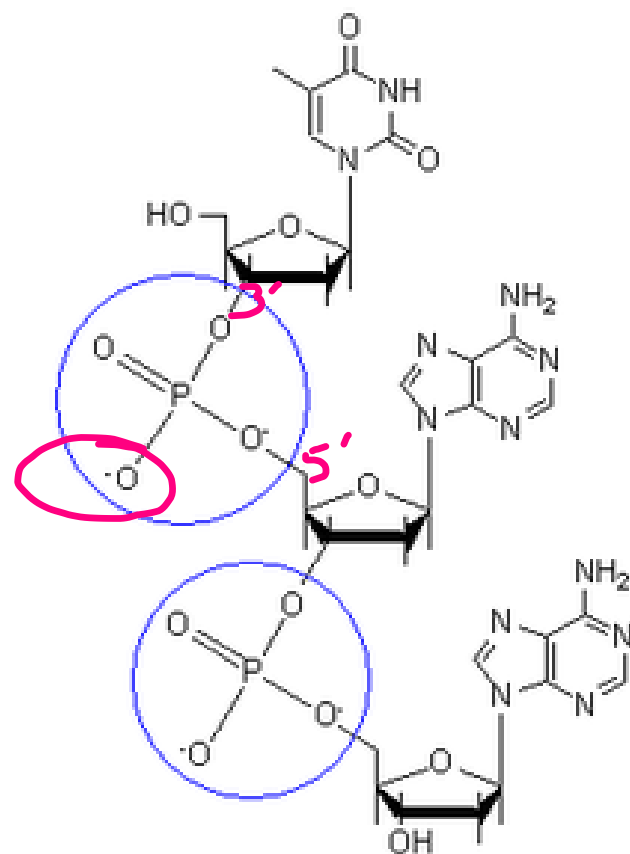
DNA Four nucleotides

- deoxyadenosine 5' monophosphate (dAMP)
- deoxythymidine 5' monophosphate (dTMP)
- deoxycytidine 5' monophosphate (dCMP)
- deoxyguanosine 5' monophosphate (dGMP)

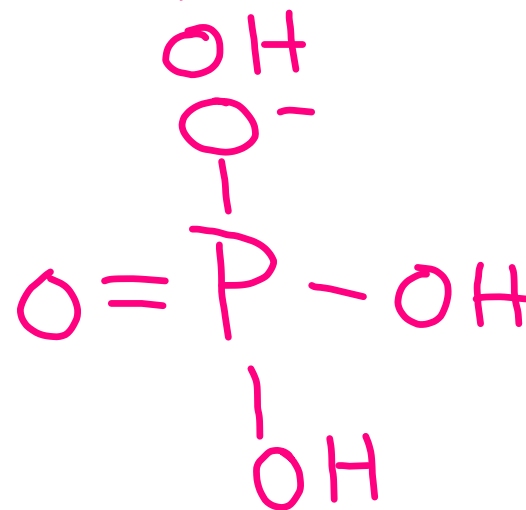
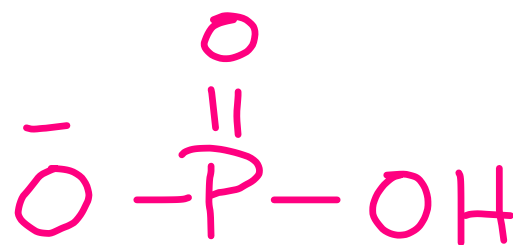
RNA Four nucleotides

- adenosine 5' monophosphate (AMP)
- uridine 5' monophosphate (UMP)
- cytidine 5' monophosphate (CMP)
- guanosine 5' monophosphate (GMP)

Nucleotides are held together in a nucleic acid chain by phosphodiester bonds between the 3' -OH of sugar (ribose or deoxyribose) and a phosphate group on the 5' - carbon of another sugar.



resonance



DNA

Amount of purines = Amount of Pyrimides

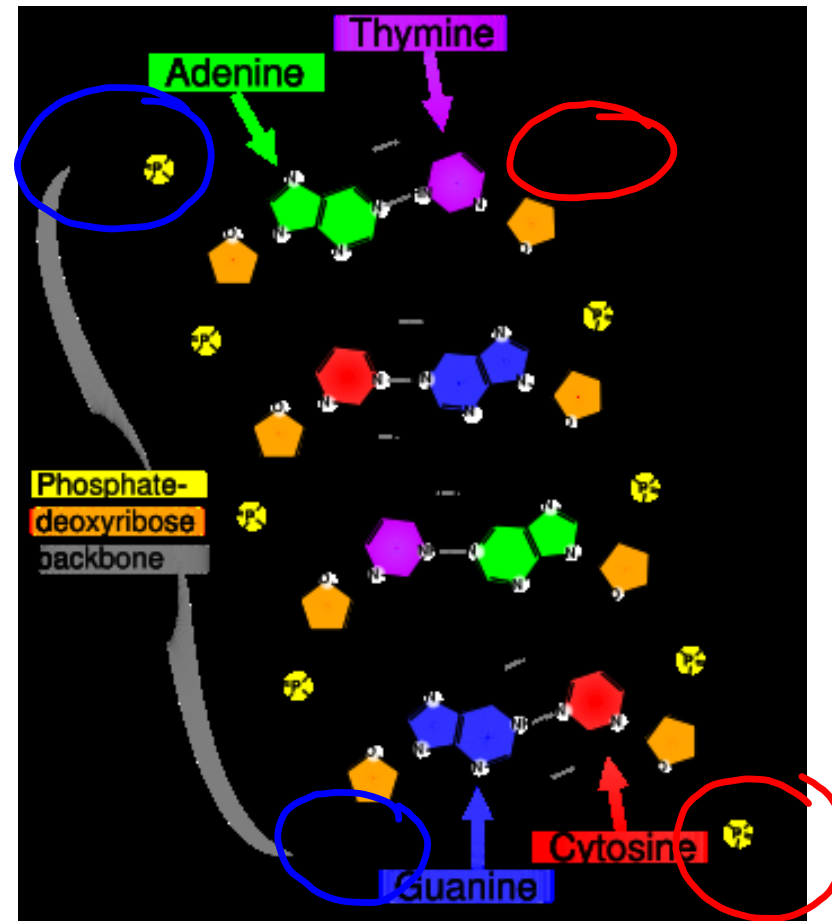
A = T

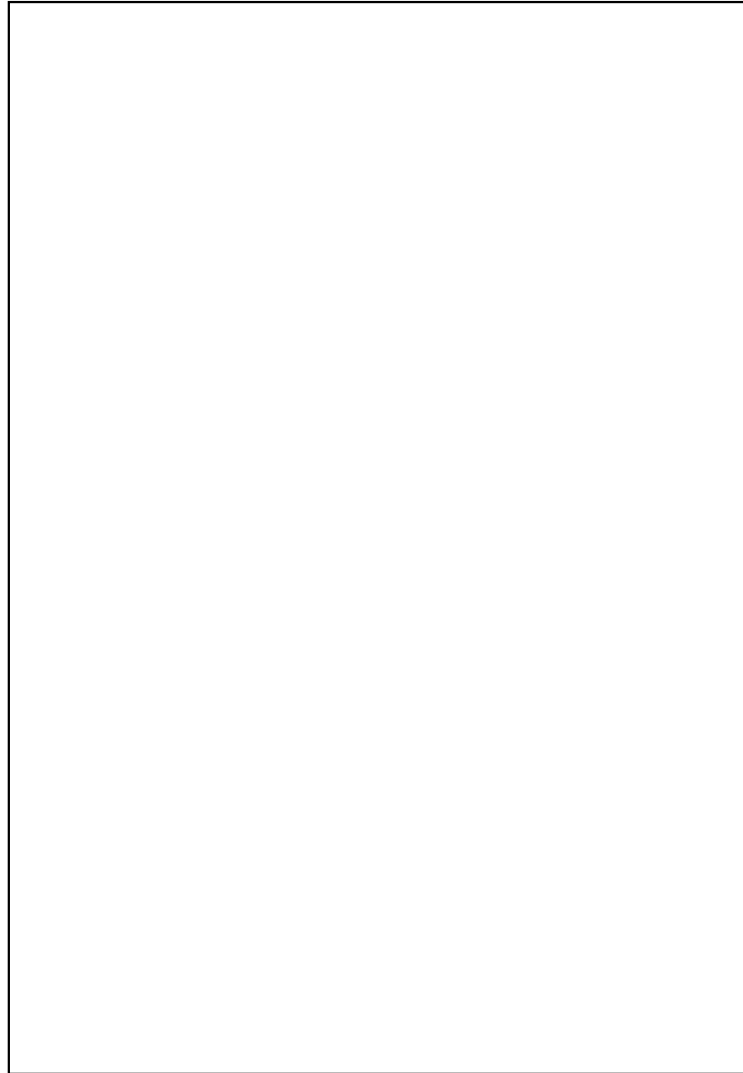
G = C

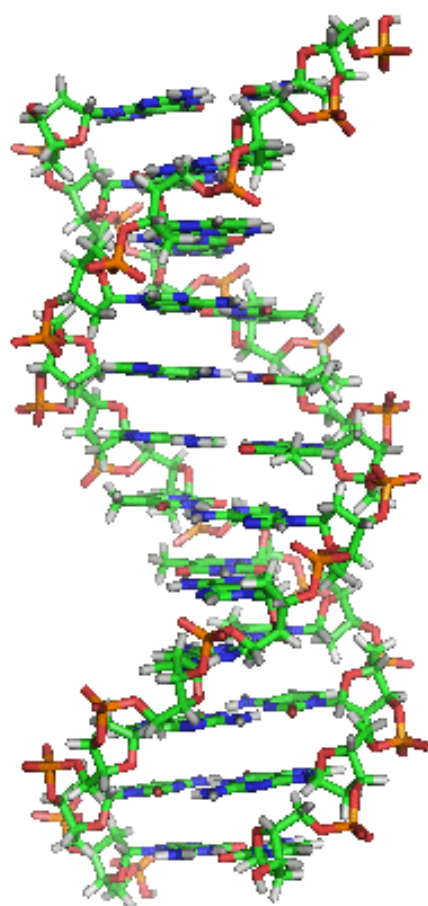
Relative Proportion (%) of Bases in DNA

Organism	A	T	G	C
Humans	30.9	29.4	19.9	19.8
Chicken	28.8	29.2	20.5	21.5
Grasshopper	29.3	29.3	20.5	20.7
Sea Urchin	32.8	32.1	17.7	17.3
Wheat	27.3	27.1	22.7	22.8
Yeast	31.3	32.9	18.7	17.1
E. Coli	24.7	23.6	26.0	25.7

DNA





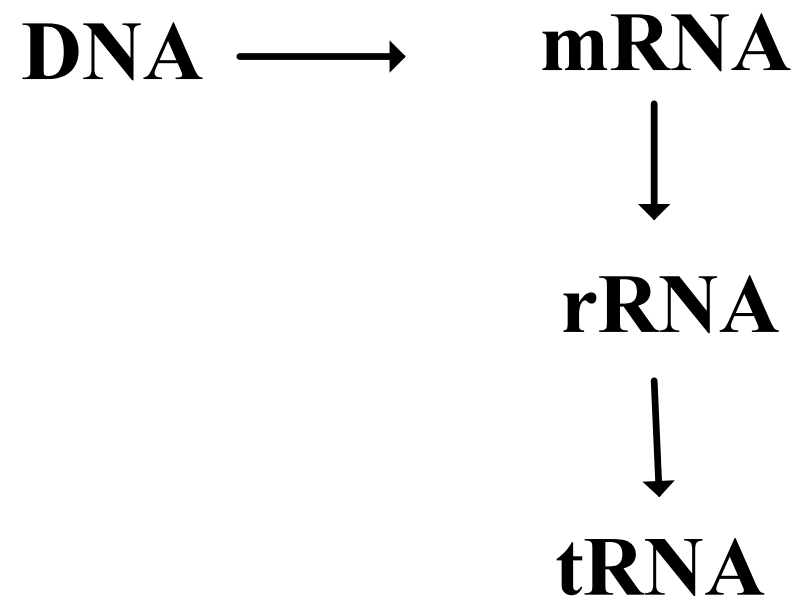


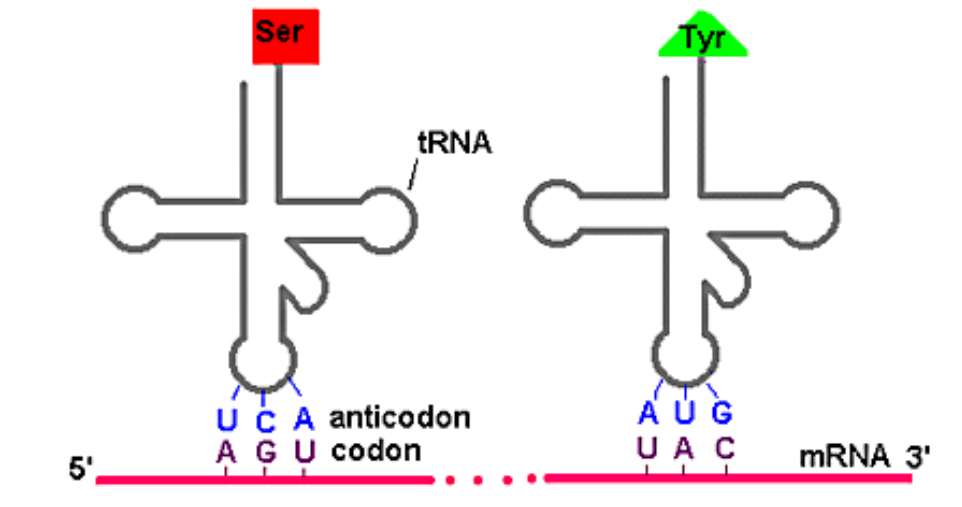
1st nucleus

2nd mitochondrial DNA

(mtDNA) is found
outside the nucleus

and is inherited solely
by the mother.





		2nd base in codon				
1st base in codon		U	C	A	G	
	U	Phe Phe Leu Leu	Ser Ser Ser Ser	Tyr Tyr STOP STOP	Cys Cys STOP Trp	U C A G
	C	Leu Leu Leu Leu	Pro Pro Pro Pro	His His Gln Gln	Arg Arg Arg Arg	U C A G
	A	Ile Ile Ile Met	Thr Thr Thr Thr	Asn Asn Lys Lys	Ser Ser Arg Arg	U C A G
G	Val Val Val Val	Ala Ala Ala Ala	Asp Asp Glu Glu	Gly Gly Gly Gly	U C A G	
						3rd base in codon

The Genetic Code