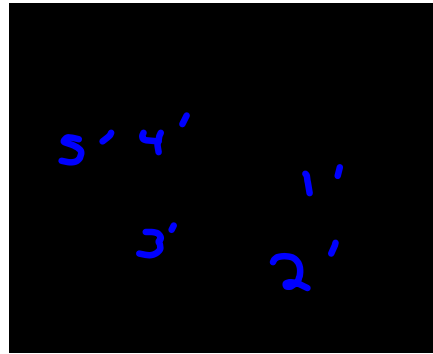




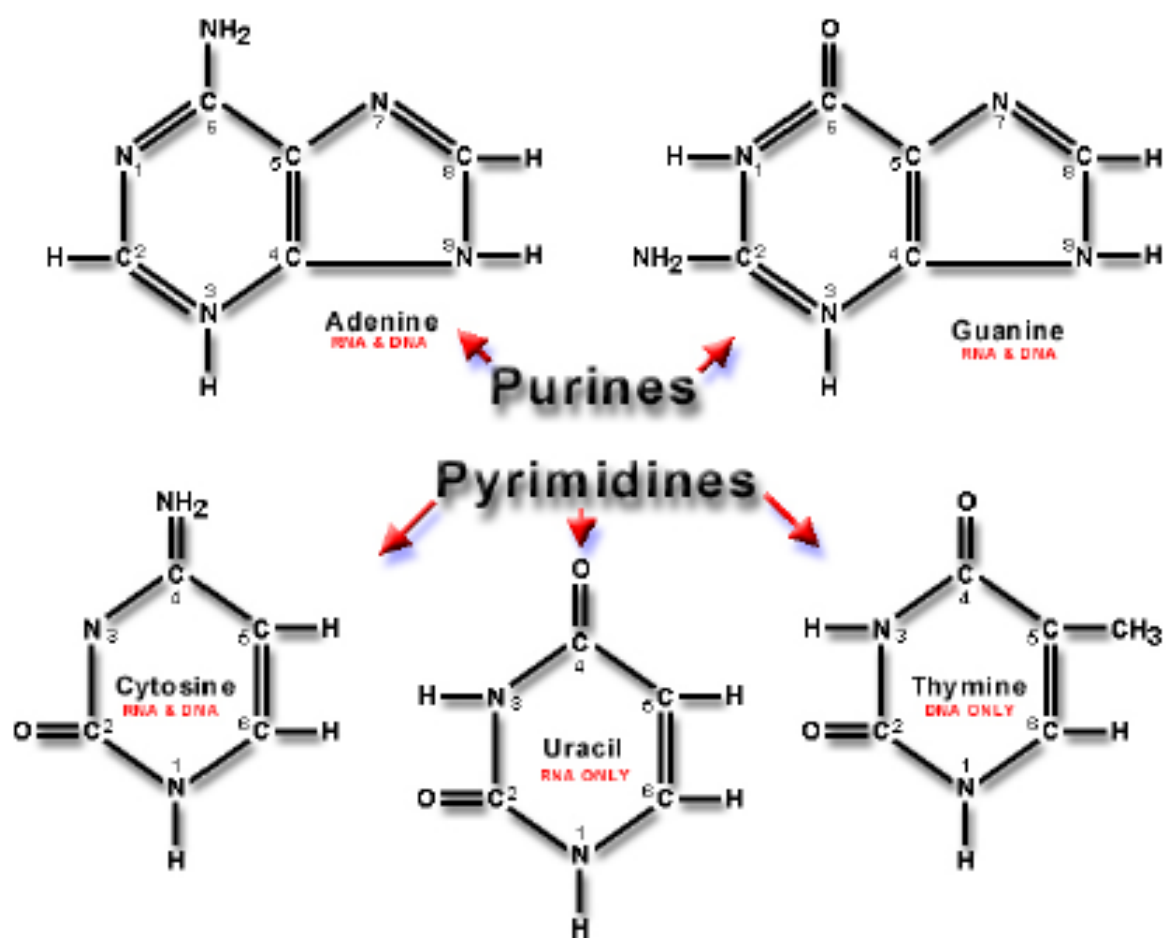
DNA
Deoxyribose

1. 1st nucleus of the cell
2. mitochondrial DNA

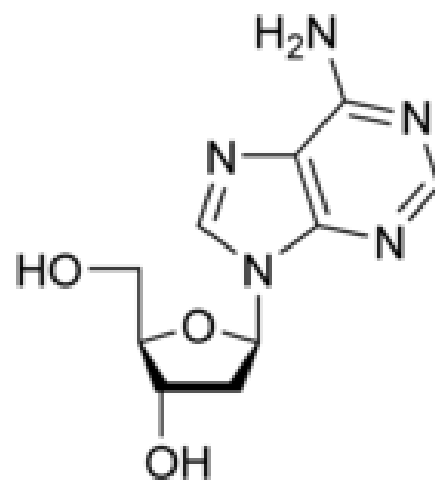
t-RNA $\rightarrow$ mRNA

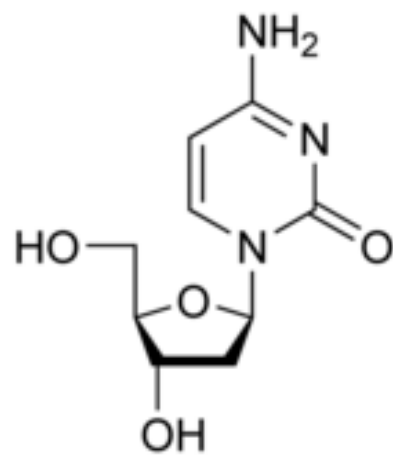
3. The sequence of codon in mRNA that specifies the amino acids order for the synthesis of proteins

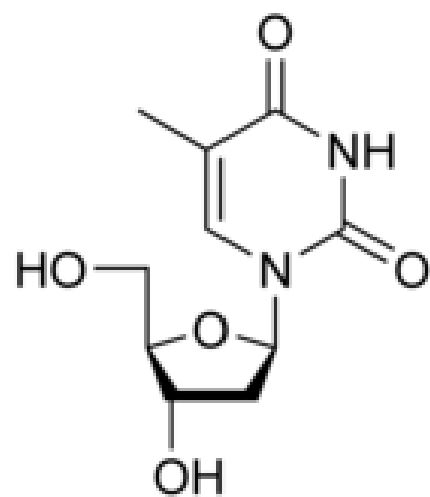
4. A change in the DNA base sequence that alters the formation of a protein in a cell.

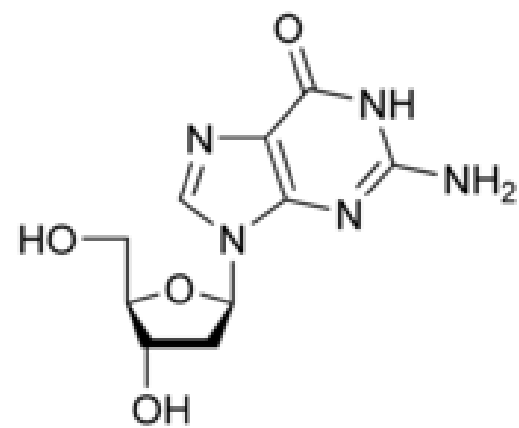


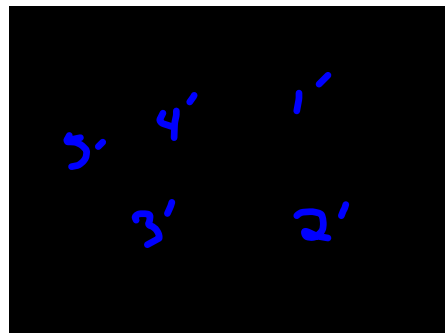
Title: Apr 9 - 10:16 AM (2 of 33)





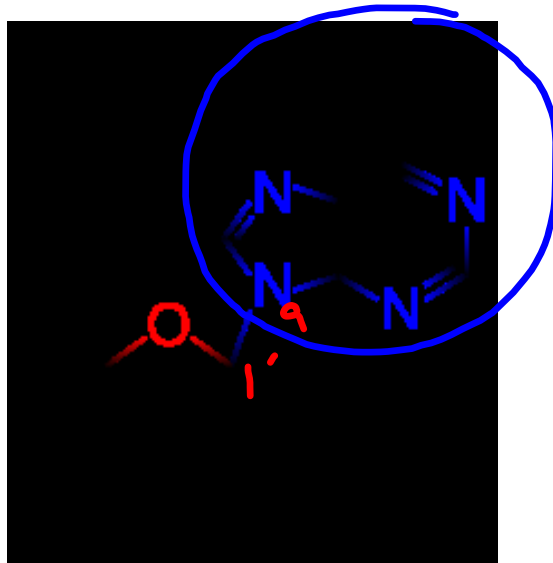






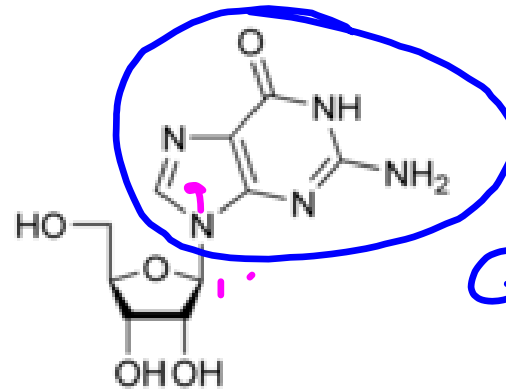
RNA

RNA Andeosin



RNA

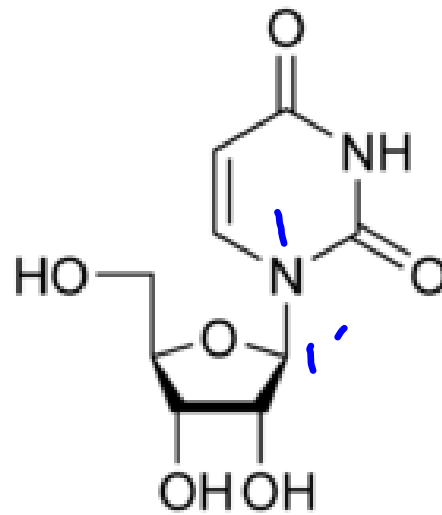
Guanosine



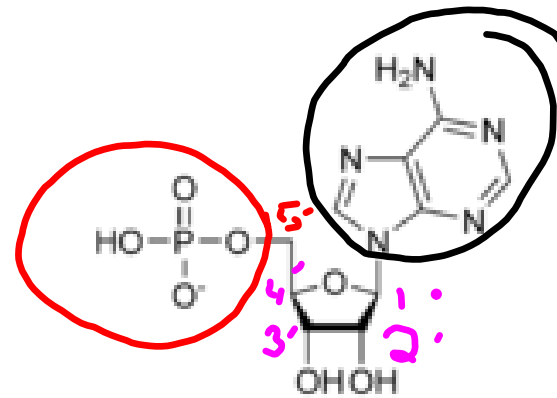
Guanine

RNA

Uridine



17.1D



Purines
Pyrimidines
Adenine

Adenosine

ribose

17.1 A.

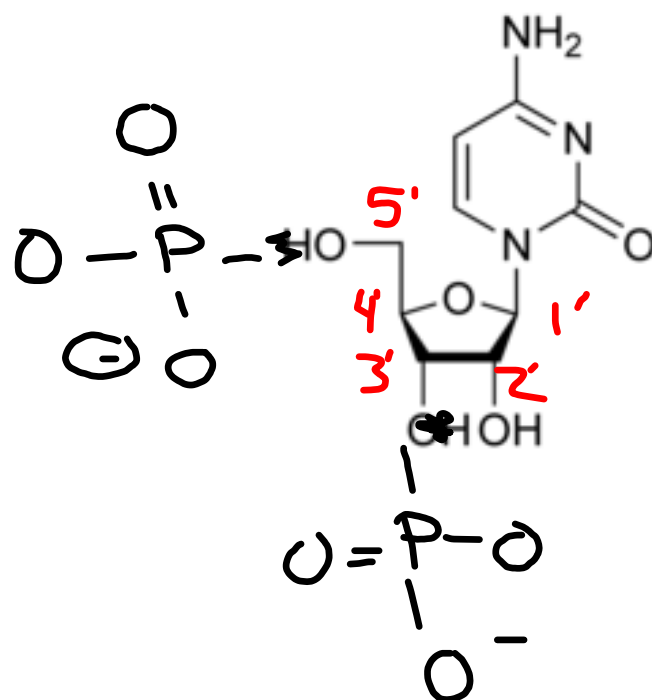
DNA A, G, C, T

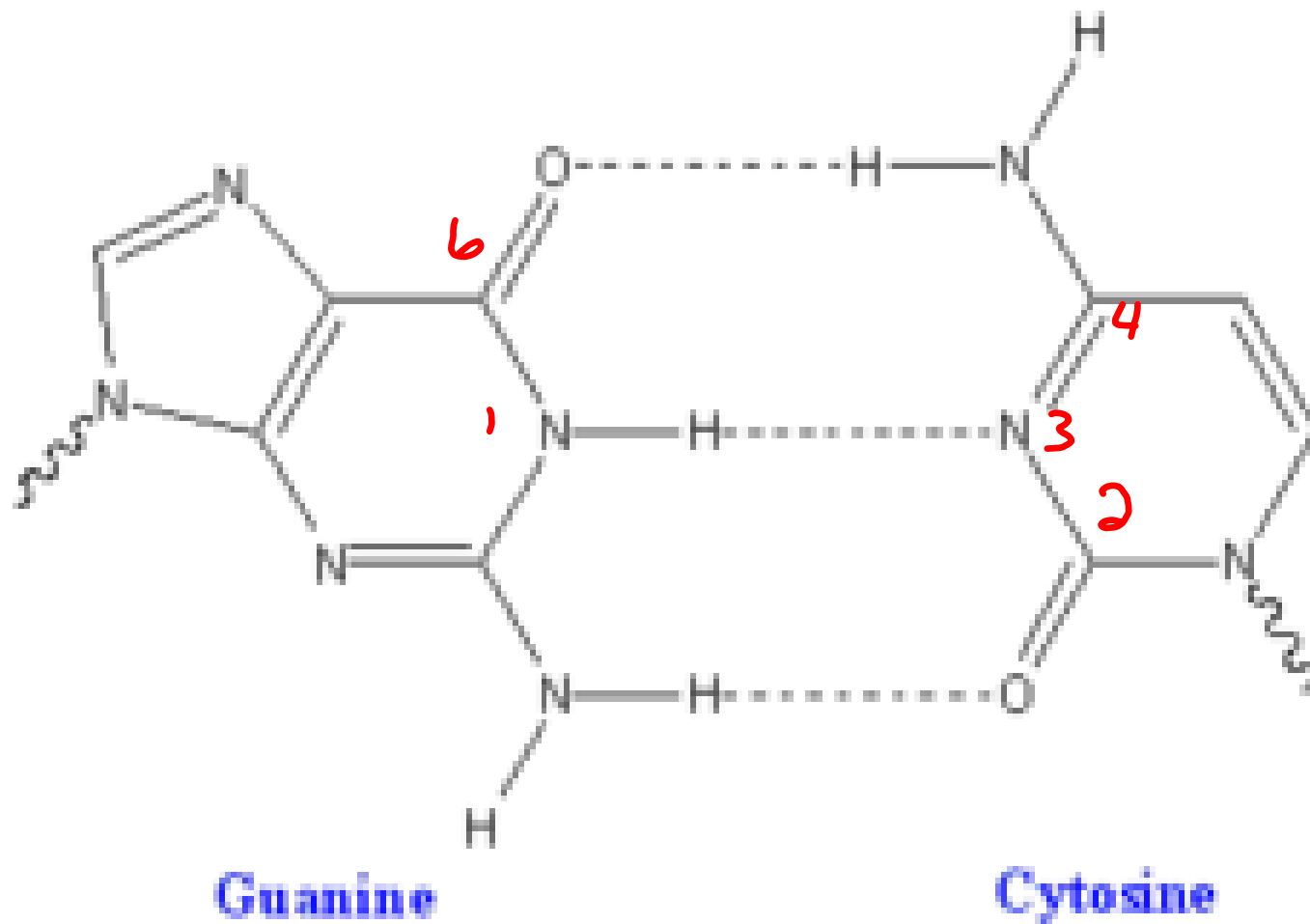
RNA A, G, C, U

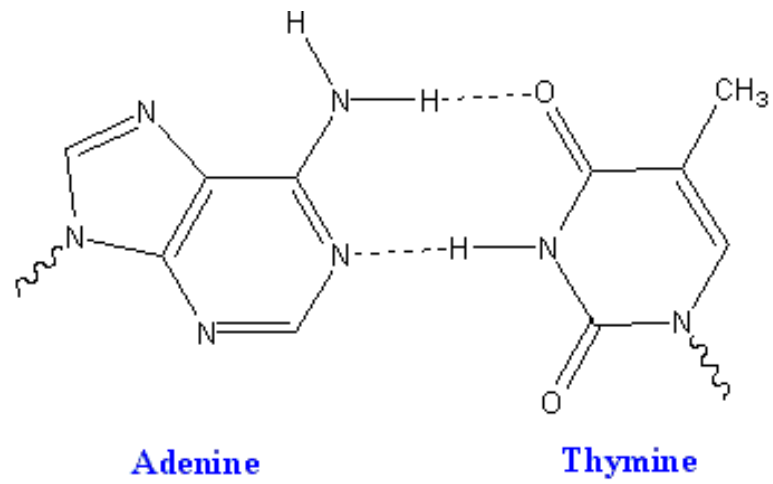
2. DNA deoxyribose
RNA ribose

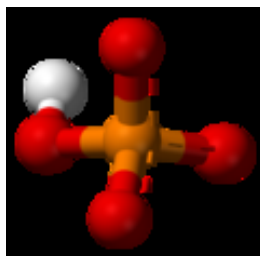
17.1B

- a. Cytosine
pyrimidine
- b. Adenine
purine
- c. Guanine
purine
- d. Thymine
pyrimidine









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

DNA Four nucleotides

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

Title: Apr 10 - 12:50 PM (22 of 33)

RNA Four nucleotides

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

Title: Apr 10 - 12:54 PM (23 of 33)

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.

Title: Apr 10 - 1:04 PM (24 of 33)

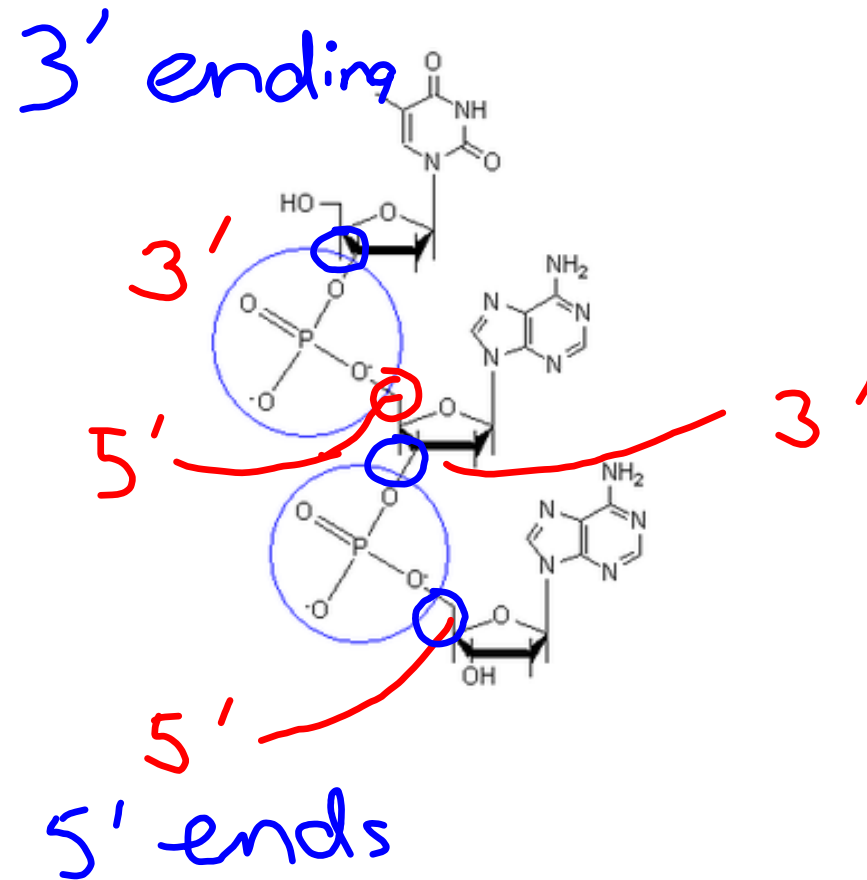
DNA

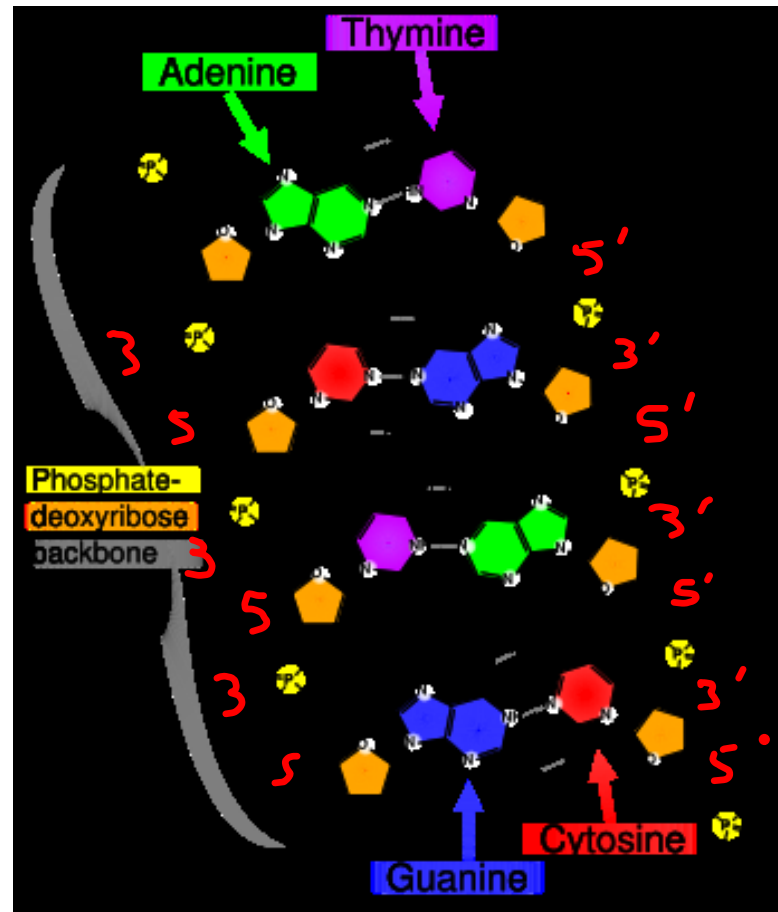
Amount of purines = Amount of Pyrimides

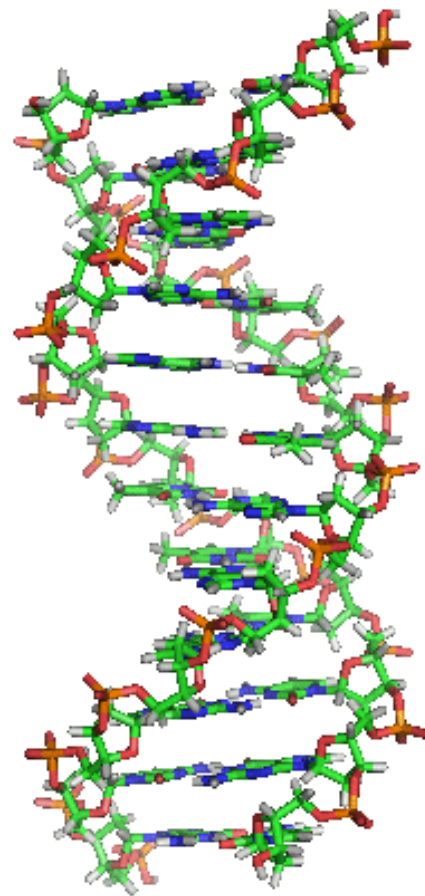
A = T

G = C

Title: Apr 11 - 9:43 AM (26 of 33)







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

Title: Apr 11 - 10:38 AM (27 of 33)

17.2 B

1. Adenine, Guanine, Uracil, Cytosine
2. adenine 5' monophosphate
3. Cytosine 3' monophosphate

17.3 A

1. Double helix

2. 3' to 5'

3. A-T G-C

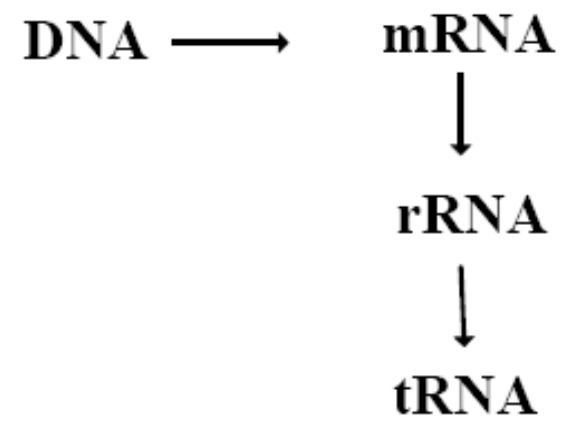
4. Complementary

17.3 B

1. A T G C T T G G C T C C
T A C G A A C C G A G G

2. HW

3. HW



Title: Apr 12 - 12:57 PM (32 of 33)

DNA is found

- 1) Eukaryotic cells
for animals and plants
- 2) Prokaryotic cells
for bacteria

DNA Replication

- a strand of DNA separates.
- the strand acts as a template.

- DNA polymerase catalyzes the formation of the phosphodiester bonds between nucleotides.
- Process form a daughter DNA from the parent DNA.

- DNA polymerase moves in the opposite direction along the strands of DNA.

RNA

- 1) The sugar is ribose
- 2) The nitrogenbase uracil replaces thymine
- 3) RNA molecules are single stranded.
- 4) RNA molecules are smaller than DNA.

Messenger RNA (mRNA)
carries genetic information
from DNA in the nucleus
to the ribosomes in the
cytoplasm for protein
synthesis. (Transcription)

Transfer RNA (tRNA), the Smallest of the RNA molec., interprets the genetic information of mRNA and brings specific amino acids to the ribosomes for protein Synthesis. (translation)

There are one or more t-RNAs for each of the amino acids

Each tRNA contains an anticodon which is a series of bases on a mRNA.

Ribosomal RNA (rRNA) is contained in the ribosomes.

Ribosomes are sites for protein synthesis.

Cells that synthesize large # of proteins have thousands of ribosomes in their cells.

Test

① #9. T A A C G T G G

mRNA A U U G G A C C

②
$$\frac{150}{3} = 50$$

③

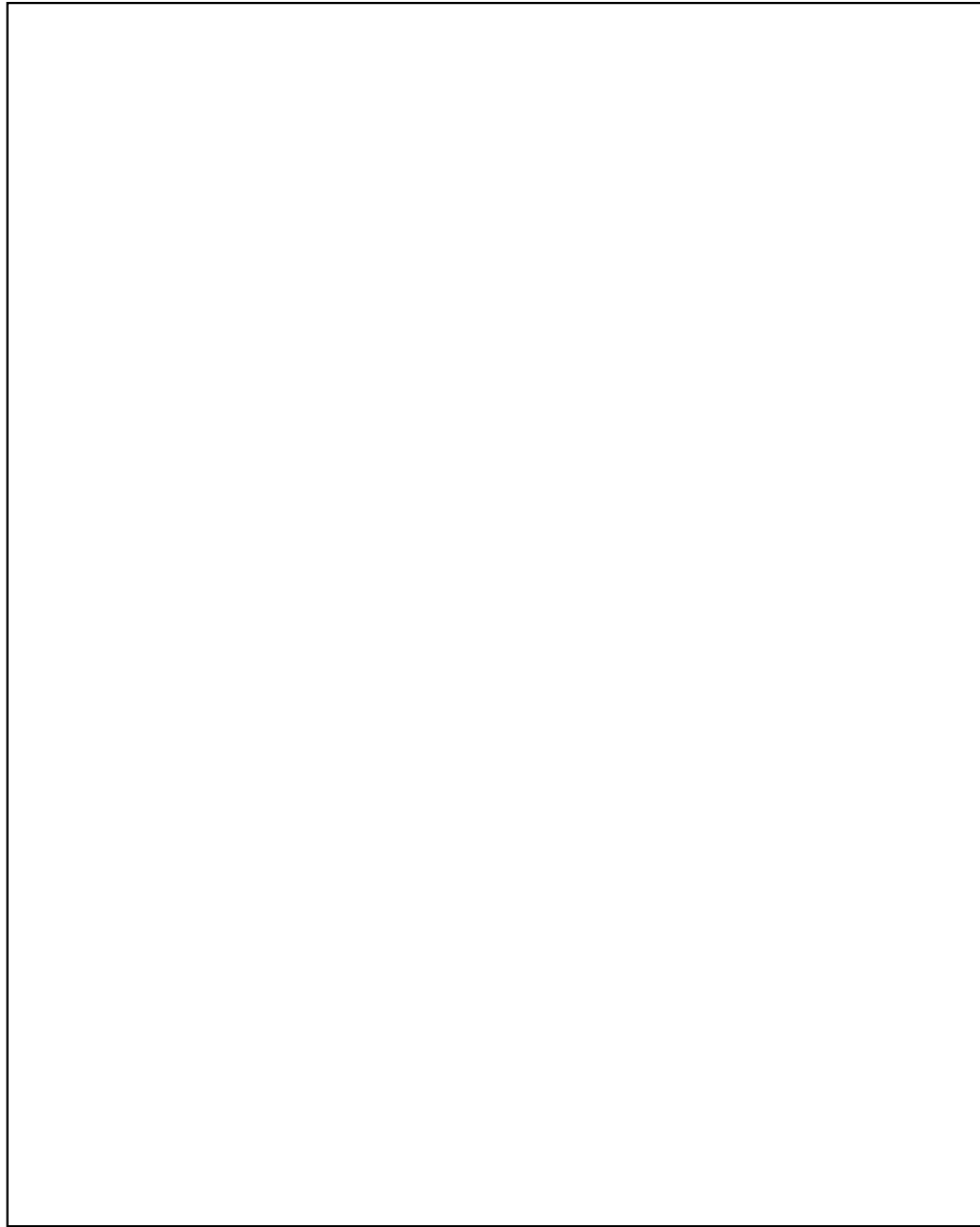
DNA -ATA- GCC-TTT- GGC -AAC

mRNA -UAU-CGG-AAA-CCG-UGG

Protein Tyr-Arg-Lys-Pro-Leu

1st nucleus
2nd mitochondrial DNA
(mtDNA) is found
outside the nucleus
and is inherited solely
by the mother.

Title: Apr 12 - 2:12 PM (31 of 33)



Up to 17.3B

Lipid WS

1. 34-35

2. Draw an acid

3. What makes an acid naturally occurring?

4. Order acids by boiling pts.

5. #20

6. Draw the steroid ring

Amino acid WS

(Given the amino acids)

1. P, N, A, B
2. Draw the protein given 4 amino acids
3. Given the drawing
Find amino acid sequence.
4. Star the chiral carbons given the drawn amino acids.

17.4 B

1. Nucleus

2. one (it separates)

4. DNA → mRNA
G → C
A → U
T → A
C → G

Codons come in three

DNA

A A T

RNA

U U A

Amino

Acid made: Leu

17.5 C

$$\frac{270}{3} = 90 \text{ amino acids}$$

21 - 25

21. Make complementary DNA
(B)

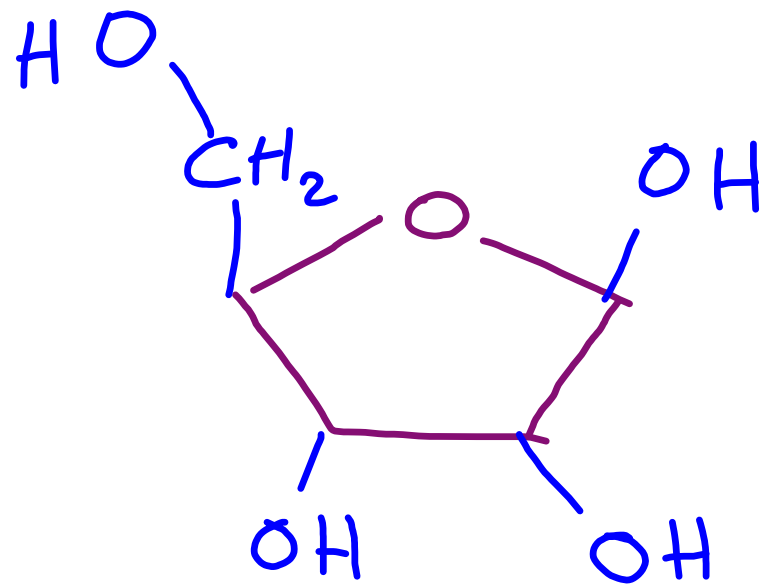
22. mRNA goes to ribosomes
(E)

23. tRNA picks up
amino acids (D)

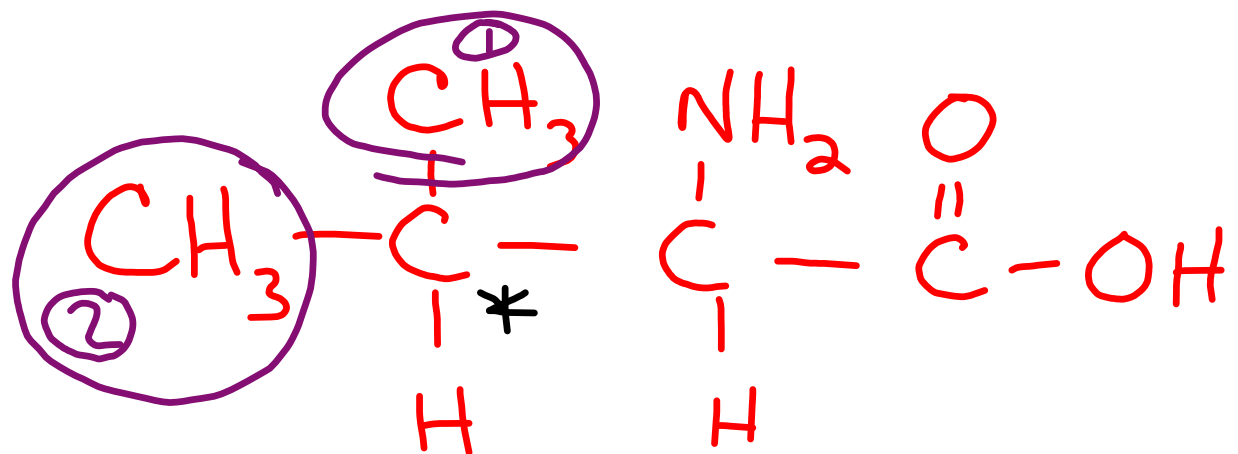
24. tRNA assembles
amino acids (A)

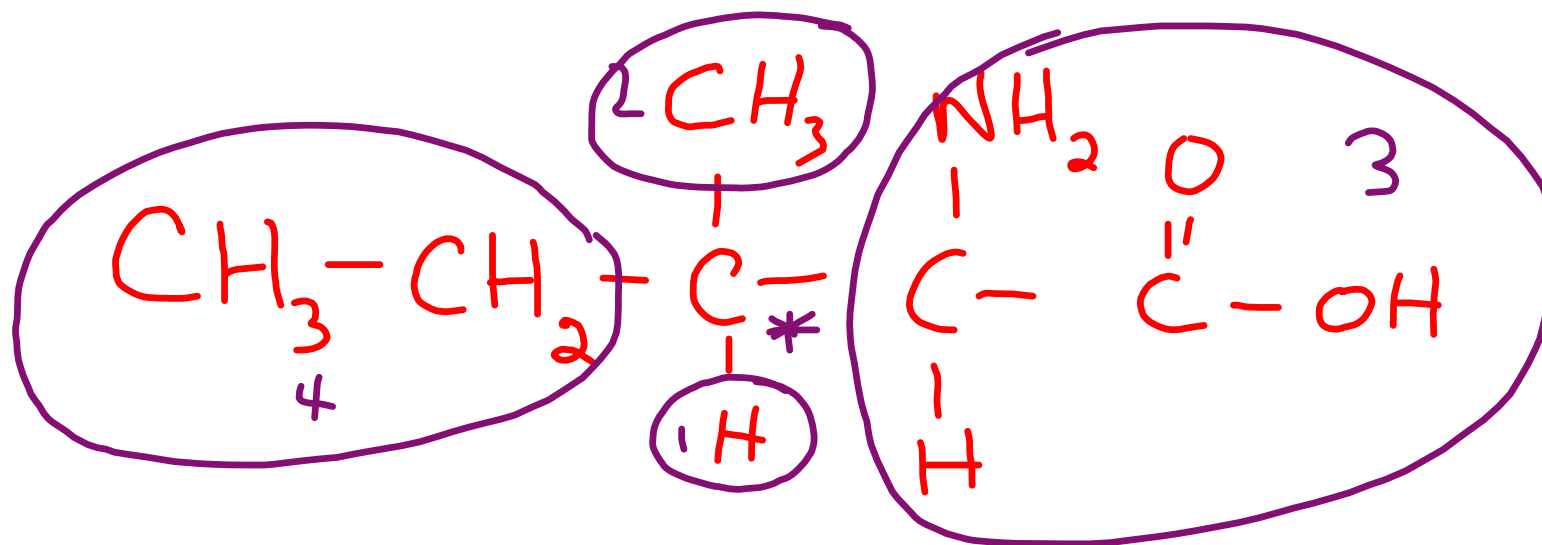
25. Protein is formed
and breaks away. (C)

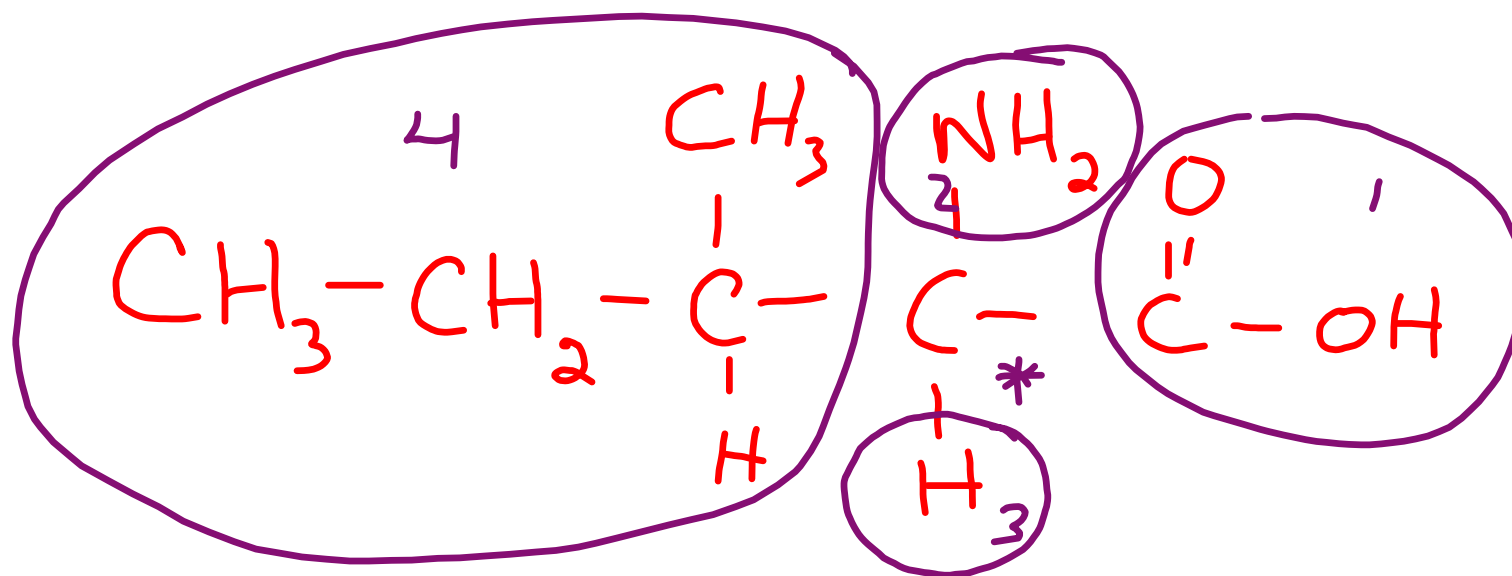
for the sugars which
is used for the RNA
and DNA. (Drawing or
name)



RNA







$18:1 \omega 7$
 $18:1 \Delta 9$
 $18:1 \omega 3$

$20:5 \omega 3$

$18:5 \omega 3, 11 \dots$

$18:2 \Delta 9, 11$

$18:2 \omega 3, 11$