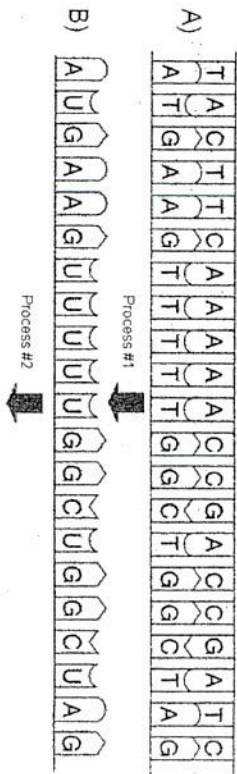


1. Match the following processes with what occurs during the process.
- A. Replication \_\_\_\_\_ Messenger RNA is made from DNA.
  - B. Transcription \_\_\_\_\_ Ribosomes use triplet codons from mRNA to combine amino acids into a protein
  - C. Translation \_\_\_\_\_ Copies of DNA molecules are made

2. Answer the following questions using the diagram.

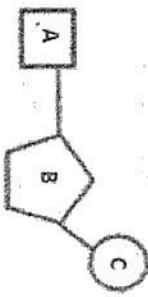


Name substance A: \_\_\_\_\_  
 Name substance B: \_\_\_\_\_  
 Name substance C: \_\_\_\_\_  
 Process #1 produces Substance B and Process #2 produces Substance C.  
 Name process #1: \_\_\_\_\_  
 Name process #2: \_\_\_\_\_

3. What is the structure shown at the right?

Name the three parts of this basic unit of DNA.

- a. \_\_\_\_\_
- b. \_\_\_\_\_
- c. \_\_\_\_\_



Which part of the DNA structure carries the genetic code? \_\_\_\_\_

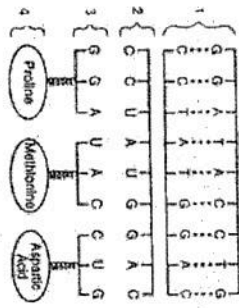
4. Using the "mRNA Codon Amino Acid Translation Chart" at the left, translate the following mRNA strand: AUG UGC GGG

Next, pretend a mistake has occurred and the mRNA strand reads AUG USA GGG. Translate the mRNA with the mistake.

How might this mistake interfere with protein synthesis?



5. Refer to the diagram below while answering the following questions.



Choose the correct number for each structure Protein (amino acid chain)

- 1 \_\_\_\_\_ DNA
- 2 \_\_\_\_\_ mRNA
- 3 \_\_\_\_\_ tRNA
- 4 \_\_\_\_\_

What two facts about structure 1 helped you to answer correctly?

- \_\_\_\_\_
- \_\_\_\_\_

What two facts about structure 2 helped you to answer correctly?

- \_\_\_\_\_
- \_\_\_\_\_