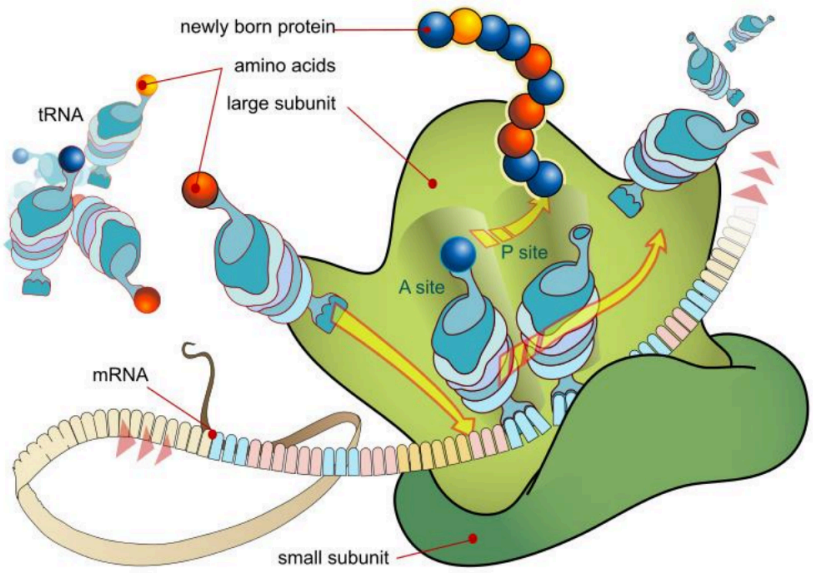
CONCEPT: RIBOSOME STRUCTURE

- The **Ribosome** is a RNA-protein complex responsible for translating mRNA into _____
  - □ The ribosome structure has:
    - One large and one small subunit
    - A composition of 2/3rd RNA and 1/3rd protein
  - □ The ribosome is _____ in the **nucleolus**
  - □ The ribosome positions the tRNA onto the mRNA
    - **A (aminoacyl) site** binds incoming charged tRNA molecules, and matches the anticodon with the codon
    - **P (peptidyl) site** is the location where the amino acid is attached to the growing peptide chain
    - **E (exit) site** is the location where the deacetylated tRNA is ready to be released
    - *Decoding center* assures only the proper tRNA is matched with the codon
    - *Peptidyltansferase center* is the region where the peptide bond is catalyzed

EXAMPLE:



PRACTICE:

1. Which of the following is true regarding the ribosome structure?
    a. Ribosomes are made up of only proteins
    b. Ribosomes are made up of only RNA
    c. Ribosomes are made up of both protein and RNA
    d. Ribosomes are made up of neither protein nor RNA

2. Which of the following is not a ribosomal position used to add amino acids to a growing polypeptide chain?
    a. A site
    b. C site
    c. P site
    d. E site

3. Which of the following ribosomal sites is responsible for adding the amino acid to a growing polypeptide chain?
    a. A site
    b. C site
    c. P site
    d. E site

4. Ribosomal assembly occurs where in the cell?
    a. Golgi
    b. Cytoplasm
    c. Endoplasmic Reticulum
    d. Nucleolus