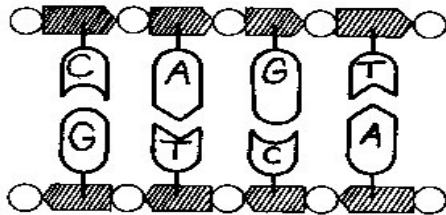


DNA MOLECULE AND REPLICATION

The building blocks of the DNA molecule are nucleotides, which consist of a phosphate, a deoxyribose sugar and a nitrogenous base. In the diagram, label these three substances on the nucleotide. The letters representing the four different nitrogenous bases are shown in the nucleotides at the right. Place the name of the base next to its letter symbol in the appropriate space.

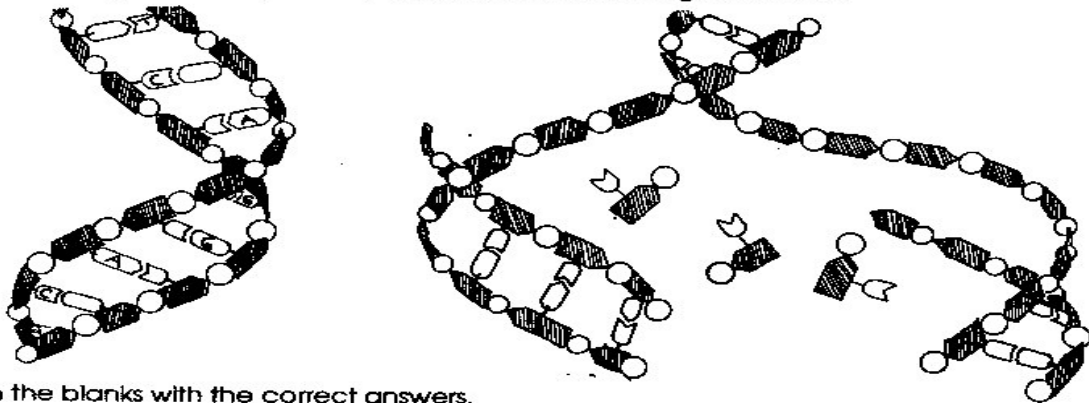


A = _____
 T = _____
 G = _____
 C = _____

The DNA molecule has a double helix shape. Two strands of DNA are coiled around each other and attached by bonds between the nitrogenous bases of each chain. Adenine always bonds with thymine, and cytosine bonds with guanine.

In the illustration at the left below, label a phosphate and a deoxyribose sugar. Fill in the symbol for each base depending on its complementary base in the opposite strand.

The diagram at the right shows the replication of DNA. Fill in the symbol for each base. Label the original strand, a new strand and a free-floating nucleotide.



Fill in the blanks with the correct answers.

The structure of DNA was determined by _____ and _____.

They described the shape of the DNA molecule as a _____.

After replication, _____ identical molecules of _____ are

produced. A gene is a sequence of _____ in a DNA molecule.