

Active Reading

Section: RNA and Gene Expression

Read the passage below. Then answer the questions that follow.

Like DNA, **ribonucleic acid (RNA)** is a nucleic acid—a molecule made of nucleotides linked together. RNA differs from DNA in three ways. First, RNA consists of a single strand of nucleotides instead of the two strands found in DNA. Second, RNA nucleotides contain the five-carbon sugar ribose rather than the sugar deoxyribose found in DNA nucleotides. And third, RNA has a nitrogenous base called **uracil**—abbreviated as U—instead of the base thymine (T) found in DNA. No thymine (T) bases are found in RNA. Like thymine, uracil is complementary to adenine whenever RNA base-pairs with another nucleic acid.

SKILL: RECOGNIZING SIMILARITIES AND DIFFERENCES

Read each question, and write your answer in the space provided.

1. In the spaces provided, write D if the statement is true of DNA. Write R if the statement is true of RNA. Write B if the statement is true of both DNA and RNA.

- _____ a. consists of a single strand of nucleotides
- _____ b. is made of nucleotides linked together
- _____ c. contains deoxyribose
- _____ d. has the nitrogenous base uracil
- _____ e. contains ribose
- _____ f. is a nucleic acid
- _____ g. consists of a double strand of nucleotides
- _____ h. contains a base that pairs with adenine

An analogy is a comparison. In the space provided, write the letter of the term or phrase that best completes the analogy.

- _____ 2. RNA is to *U* as DNA is to
- a. *C*
- b. *G*
- c. *T*
- d. *A*