Name _____ Class _____ Date _____

Skills Worksheet

Directed Reading

Section: The Replication of DNA

In the space provided, write the letter of the description that best matches the term or phrase.

_____ **1.** DNA replication

_____ **2.** DNA helicases

_____ **3.** replication forks

_____ **4.** DNA polymerases

_____ **5.** synthesis

a. add nucleotides to the exposed nitrogen bases according to the base-pairing rules

b. process of making a copy of DNA

c. the two areas that result when the double helix separates during DNA replication

d. open up the double helix by breaking the hydrogen bonds between nitrogen bases

e. phase during the life cycle of a cell during which DNA replication occurs

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

6. How did the complementary relationship between the sequences of nucleotides lead to the discovery of DNA replication?

_____

_____

_____

7. What prevents the separated DNA strands from reattaching to one another during DNA replication?

_____

_____

_____

8. What prevents the wrong nucleotide from being added to the new strand during DNA replication?

_____

_____

Complete each statement by writing the correct term or phrase in the space provided.

9. Prokaryotic DNA is reproduced with _____ replication forks.

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10. Each human chromosome is replicated in about _____ sections.

11. The number of nucleotides between each replication fork in human DNA is approximately _____ .

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