

Biology I

Replication

Practice Sheet

Match the description in Column A with the term in Column B.

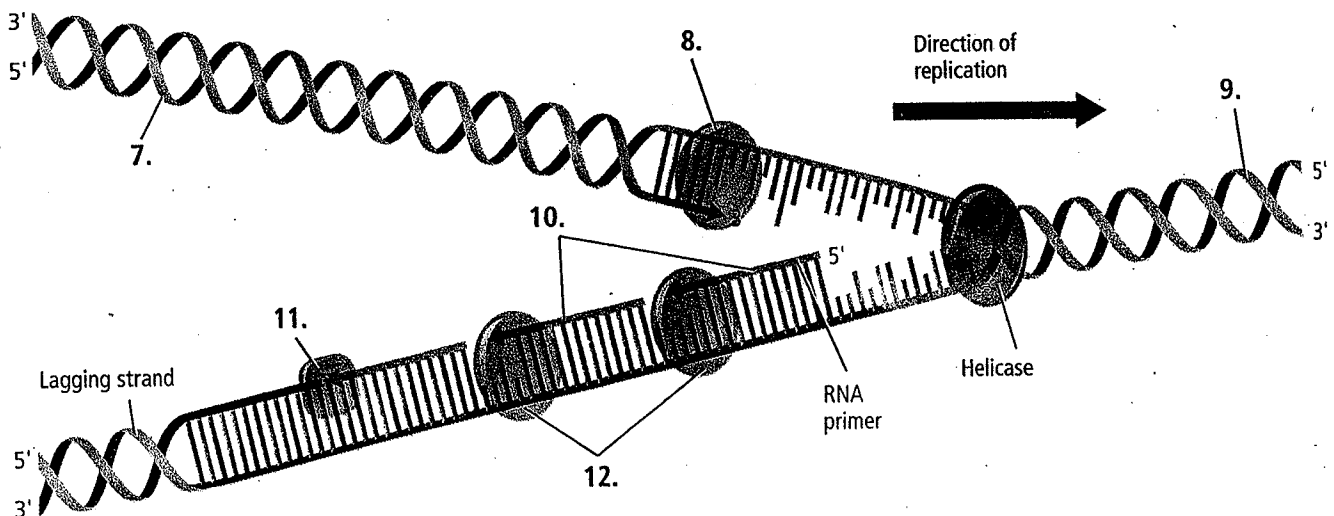
- Column A**
- _____ 1. unwinds in multiple areas as DNA is replicated
- _____ 2. parental strands separate and serve as templates for new strands of DNA
- _____ 3. the DNA of prokaryotes
- _____ 4. keep the strands of DNA separate during replication
- _____ 5. elongates as DNA unwinds and is replicated continuously
- _____ 6. unwinds the double helix

- Column B**
- A. semiconservative replication
- B. DNA helicase
- C. single-stranded binding proteins
- D. leading strand
- E. eukaryotic DNA
- F. circular DNA

In your textbook, read about base pairing.

Label the diagram showing DNA replication. Use these choices:

- | | | | | |
|------------|----------------|----------------|-------------------|--------------|
| DNA ligase | DNA polymerase | leading strand | Okazaki fragments | parental DNA |
| 7. _____ | | | 10. _____ | |
| 8. _____ | | | 11. _____ | |
| 9. _____ | | | 12. _____ | |



Complete the table below on the role of each protein in DNA replication. The first one has been done for you.

Protein	Stage of DNA Replication	Activity
DNA helicase	unwinding	unwinds and unzips the DNA
DNA ligase		
DNA polymerase		
RNA primase		

Describe semiconservative DNA replication.

Model	During replication, the parental strands	The new DNA molecule is composed of
Semiconservative replication		

Analyze how a DNA molecule acts like a template.
