Honors Biology Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
NDHS Per: \_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_

**DNA Replication**

1. What is the structure of a typical nucleotide?
2. Why must purines link to pyrimadines?
3. DNA is organized in the 5’ to 3’ direction. Explain what this means. What is meant by anti-parallel?
4. What is meant by semi-conservative replication of DNA?
5. What are the five main enzymes involved in DNA replication?
6. What is the problem with the “lagging” strand of DNA? What does this form?
7. What kinds of errors can occur in DNA replication? What enzymes are involved in fixing them?
8. What is a telomere? Why is it important? How do they differ in cancer cells?
9. Draw out the process of DNA replication showing all the enzymes. Show both replication forks and the leading and lagging strands.