1. (2 pts) ________________ informs one thread in the waiting state to go back to the ready state, whereas ________________ informs every thread in the waiting state to go back to the ready state.

2. (2 pts) In order to place itself into the waiting state or inform other threads to leave the waiting state and go back to the ready state, a thread must be executing in a ________________ method or block of code in an object which allows it to obtain a lock on the object.

3. (2 pts) The method ________________ from the Thread class is deprecated and should be replaced by checking the value of a variable to determine if a Thread should keep running, and the method ________________ from the Thread class has been deprecated and should be replaced by using the method wait inherited from Object.java.

4. (2 pts) Suppose we have a linked list class definition containing a Node class with public instance variables datum of type int and next of type Node. We want to include a method in the definition of the linked list that will allow us to remove any element from the list. Fill in the following code. Assume that the number is found in the list.

   ```java
   public void remove(int number) {
       Node previous = head;
       for (Node current=head; ________________ ;current = current.next) {
           if (previous == current &&
               current.datum == number) {
               ________________ ;
               else if (current.datum == number)
                 previous.next = current.next;
               previous = current;
           }
       }
   }
   ```

5. (2 pts) We can define the sumorial of a non-negative integer n as the sumorial of n is 0 if n is 0, and the sumorial of n is n + the sumorial of n-1 if n is greater than 0. Translate this definition into a recursive method called sumorial. Just write the method. You don’t need to write a complete class definition.