Pseudocode Test

**Part A:** Convert the following pseudocode into Java source code.

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|  | **pseudocode** | **Java** |
| 1 | N1 = 8  N2 = 19  if N1 = N2 then  output N1, " is equal to ", N2  else if N1 < N2  output N1, " is less than ", N2  else  output N1, " is greater than ", N2  end if | int n1=8; int n2 = 19;  if(n1 == n2)  SOPL(n1 + " is equal to " + n2); else if(n1 < n2)  SOPL(n1 + " is less than " + n2);  else  SOPL(n1 + " is greater than " + n2); |
| 2 | STR1 = "dog"  STR2 = "cat"  NUM = 25  if NOT STR1 = STR2 AND  STR1.length() <= STR2.length() then  NUM = NUM + 5  end if  output NUM | String str1 = "dog"; String str2 = "cat";  int num = 25; if(!str1.equals(str2) &&  str1.length() <= str2.length()) { num += 5; }  SOPL (num); |
| 3 | COUNT = 0  loop while COUNT < 50  output COUNT div 2  COUNT = COUNT + 1  end loop | int count = 0; while(count < 50) {  SOPL(count / 2);  count++;  } |
| 4 | COUNT = 0  SUM = 0  loop until COUNT = 10  SUM = SUM + COUNT  COUNT = COUNT + 1  end loop | int count = 0; int sum = 0;  do {  sum += count;  count++; } while(count < 10); |
| 5 | loop I from 1 to 10  if I mod 2 = 0 then  output "even"  else  output "odd"  end if  end loop | for(int i = 1; i <= 10; i++) {  if( i % 2 == 0)  SOPL("even");  else  SOPL("odd");  } |
| 6 | loop X from 0 to ARRAY.length - 1  if ARRAY[X] <= 10 then  ARRAY[X] = ARRAY[X] \* 2  end if  end loop | for(int x =0; x < array.length; x++) {  if(array[x] <= 10)  array[x] = array[x] \* 2;  } |

**Part B:** Convert the following flowcharts into pseudocode.

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|  | **flowchart** | **pseudocode** |
| 7 |  | A = 2  B = 5  if A < B then  output "yes"  else  output "no" |
| 8 |  | X = 0  loop while x < 10  output X  X = X + 1  end loop |

**Part C**: Write pseudocode for the following problems.

10. Determine if two numbers are both greater than 0. If they are print "positive integers" otherwise   
 print "negative integers".

if X > 0 AND Y > 0 then  
 output "positive integers"  
 else  
 output "negative integers"  
 end if

11. Given two random strings write an algorithm that will display the strings in alphabetical order.   
 Assume the two strings have already been defined and assigned string values.

if STR1 < STR2 then  
 output STR1, " ", STR2  
 else  
 output STR2, " ", STR1  
 end if

12. Display the odd numbers from 1 to 100.

loop X from 1 to 100  
 if X MOD 2 = 1  
 output X  
 end if  
 end loop