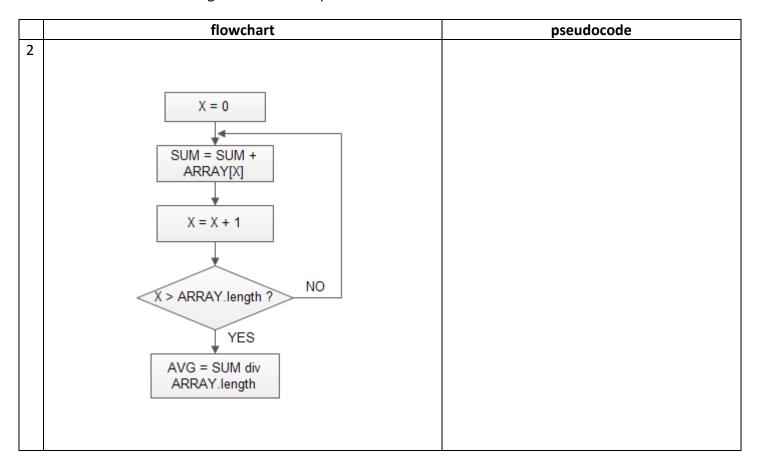
IB Computer Science Test 01

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

	pseudocode	Java
1	loop X from 1 to 10	public class Test01 {
	if X mod 2 = 0 then	
	output "even"	<pre>public static void main(String[] args) {</pre>
	else	
	output "odd"	
	end if	
	end loop	
		} // end main
		} // end Test01

Part B: Convert the following flowcharts into pseudocode.



is only divisible by itself and one.

3. A method returns true if a given number is prime otherwise it returns false. A number is prime if it

Part C: Write pseudocode for the following problems.

Part D: Trace Tables

A **trace table** is a technique used to test algorithms in order to verify that no logical errors occur while an algorithm is being processed. The table usually takes the form of a multi-column, multi-row table with each column showing a variable, and each row showing each number input into the algorithm and the subsequent values of the variables.

Create a trace table for each of the following algorithms, represented by pseudocode:

4	A = 1	Trace Table					
	loop I from 1 to 5 $A = A * I$			I		Α	
	end loop output A					1	
				1			
				2			
				3		-	
			4	4			
			. !	5			
		OUTPUT:					
5	MYARRAY[] = {3, 8, 2, 5} TOTAL = 0		Trace Table				
	loop I from 1 to 3			arı	ray		
	<pre>MYARRAY[I] = MYARRAY[I - 1] TOTAL = TOTAL + MYARRAY[I]</pre>	i	0	1	2	3	total
	end loop						

Command Terms					
Term	Level	Definition			
Distinguish	2	Make clear the differences between two or more concepts or items.			
Explain	3	Give a detailed account including reasons or causes.			
Outline	2	Give a brief account or summary			

Part E: Nature of Programming Languages

	Device and the second s
6	Distinguish between a compiled language and an interpreted language
17	Explain the essential features of a computer language
7	Explain the essential features of a computer language.
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8	Explain the need for higher level languages
9	Outline the need for a translation process from a higher level language to machine executable code.