QUIZ EXAMINATION

CSE 220: Data Structures

A

Section: _____ ID: _____ Name in CAPITAL: _____

Question 1 [10 marks]

Design the **borderMath()** method that takes a 2D Matrix of integers in its parameter. The method sums up the **first row and last column** then subtracts it from the *summation of the first column and last row* and prints the result.

Note: Your code should work for any shape of matrix.

Sample Given Matrix & Function Call		Sample Output
1, 2, 3, 4, 5 4, 1, 4, 2, **6** 5, 8, 3, 4, **2** **1, 8, 6, 3, 9**	borderMath(matrix)	**1**
		Explanation: (1+2+3+4+5)+(5+6+2+9)=37, (1+4+5+1)+(1+8+6+3+9) = 38. So, 38-37=1

Question 2 [5 marks]

JAVA	PYTHON

`Node x = new Node(50);`
`Node b = new Node(43);`
`Node a = x;`
`x.next = b;`
`b.next = a;`
`Node n = new Node(32);`
`n.next = a;`
	`x = Node(50)`
	`b = Node(43)`
	`a = x`
	`x.next = b`
	`b.next = a`
	`n = Node(32)`
	`n.next = a`

How many nodes are created in the code above? [1 mark]	
How many connections are made in the code above? [1 mark]	
Draw the nodes & connection as written in the code above. [2 mark]	
What is the space complexity of a selection sort program on an array of ***n*** length? [1 mark]	