KEMENTERIAN PENDIDIKAN TINGGI POLITEKNIK MALAYSIA KUCHING SARAWAK **JABATAN MATEMATIK, SAINS & KOMPUTER**		COURSE CODE / COURSE NAME	DBM2033 DISCRETE MATHEMATICS		
		COURSEWORK ASSESSMENT	QUIZ 3		
		SESSION	JUNE 2017		
NAME		DURATION	20 minutes	CLO 1	
REGISTRATION NO.					
PROGRAMME/SECTION		TOTAL MARKS			

INSTRUCTION:

Answer all the questions.

Question 1 (CLO1, C2)

Let P(n) be the statement $1 + 3 + 5 + \cdots + (2n - 1) = n^2$ where n is all positive integers.

(a) Show the P(1) is true and completing the basis step of the proof. [1 marks]

(b) What is the inductive hypothesis? [1 marks]

(c) Complete the inductive step and make conclusion. [4 marks]

Question 2 (CLO1, C2)

Suppose that f is defined recursively by f(0) = 2 and f(n+1) = 3f(n) – 2[3 – f(n)] for n = 1,2,3,..... Find:

a) f(1) (2 marks)

b) f(2) (2 marks)