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UNIVERSITY OF CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2010 question paper for the guidance of teachers

0607 CAMBRIDGE INTERNATIONAL MATHEMATICS

0607/05

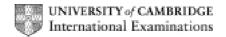
Paper 5 (Core), maximum raw mark 24

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

• CIE will not enter into discussions or correspondence in connection with these mark schemes.

CIE is publishing the mark schemes for the October/November 2010 question papers for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.



Page 2	Mark Scheme: Teachers' version	Syllabus	Paper	
	IGCSE – October/November 2010	0607	05	

INVESTIGATION THE FIBONACCI SEQUENCE										
1		rm sition		12	13	14	15			
		oonacci mber		144	233	377	610	2 C1	1 1ft	ft for 610 – 233 +
									C1 for showing working	'their 377'
2	2 (a)									
	Term position 3 6 9 12						12		1 for both in row 1	
		Fibonacci number 2		2	8	34	144	2	1 for both in row 2	
	(b) (i)									
		Term posit		4	8	12	16		1	
		Fibonacci number 3		3	21 144		987		2ft for all 3 in row 2 -1 eeoo	ft from Q1 for 987 – 'their 377' + 'their
	3 is the 4 th term Every 4 th term							5	1 6666	610'
	(ii)									
		Term posit		5	10	15	20		2 for all 3 in row 1 -1eeoo	
		Fibon numb		5	55	610	6765		1ft	ft from Q1 for 'their 610'
	5 is the 5 th term Every 5 th term in the is a multiple of 5								1 1 for both entries	
	(c) Every 6 th term in the							1		

Page 3	Mark Scheme: Teachers' version	Syllabus	Paper
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3	(a) 5 by 8 rectangle drawn, divided into: one 5 by 5 square one 3 by 3 square one 2 by 2 square and two 1 by 1 squares								If not all correct 1 for any 2 squares shown excluding the two 1 by 1 squares	
	 (b) 8 by 13 rectangle drawn, divided into: one 8 by 8 square one 5 by 5 square one 3 by 3 square one 2 by 2 square and two 1 by 1 squares (c) (i) 							2	If not all correct 1 for any 2 squares shown	
	Size of rectangle	1 by 1	1 by 2	2 by 3	3 by 5	5 by 8	8 by 13			
	Least number of squares	1	2	3	4	5	6	1	1 for all 4 entries	
	(ii) 8									
	(iii) 89 144								1 each	
	(d) $n-1$									
								[Total: 24 +	C1 = 25 scaled to 24]	