CAMBRIDGE INTERNATIONAL EXAMINATIONS

International General Certificate of Secondary Education

MARK SCHEME for the October/November 2013 series

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 should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

Cambridge will not enter into discussions about these mark schemes.

Cambridge is publishing the mark schemes for the October/November 2013 series for most IGCSE, GCE Advanced Level and Advanced Subsidiary Level components and some Ordinary Level components.

1		108 ÷ 27 [= 4]	**1**	
2	**(a) (i)**	684, 1096, 1780, 2876	**1**	
	(ii)	4 www	**1FT**	**FT** *their* total ÷ *their* 5th term
	(b) (i)	21.42, 38.32, 59.74, 98.06	**1**	
	(ii)	4 www	**1FT**	**FT** *their* total ÷ *their* 5th term
	(c) (i)	Candidates own negative sequence correct	**1**	
	(ii)	4 www	**1**	
	(d)	5th term = sum of first 6 terms divided by 4 OR sum of first 6 terms divided by 5th term = 4 OR 5th term multiplied by 4 = sum of first 6 terms ORthe 5th term is always 4 times smaller than the sum of the first 6 terms oe	**1**	
3	**(a)**	$p + 2q$ + $2p + 3q$ | $3p + 5q$	**1,1**	Accept different order
	(b)	$8p + 12q$ oe isw OR $5p + 7q$ plus *their* $3p + 5q$	**1FT**	**FT** *their* 6th term in 3(a) **C** opportunity
	(c)	$2p + 3q = \frac{8p+12q}{4}$ OR $4(2p + 3q) = 8p + 12q$ OR $\frac{8p+12q}{2p+3q} = 4$	**1**	

4	**(a) (i)**	71, 115, 186, 301	**1**	
	(ii)	11 www	**1FT**	**FT** *their* sum ÷ *their* 7th term
	(b) (i)	$5p + 8q$ $8p + 13q$ $13p + 21q$ $21p + 34q$	**2FT**	**FT** *their* previous 6th term in p and q in 3(a) **B1** for any two correct including after incorrect FT
	(ii)	$55p + 88q$ oe isw	**1**	**C** opportunity
	(iii)	$5p + 8q = \frac{55p + 88q}{11}$ OR $11(5p + 8q) = 55p + 88q$ OR $\frac{55p + 88q}{5p + 8q} = 11$	**1**	
5	**(a)**	$34p + 55q$, $55p + 89q$, $89p + 144q$, $144p + 233q$	**2FT**	**FT** *their* previous 9^{th} and 10^{th} terms in p and q in 4(b)(i) **B1** for any two correct including after incorrect FT
	(b)	$377p + 609q$ oe isw	**1**	**C** opportunity
	(c)	29 soi	**1**	**C** opportunity
	(d)	$13p + 21q = (377p + 609q) \div 29$ OR $(377p + 609q) \div (13p + 21q) = 29$ OR $29(13p + 21q) = 377p + 609q$ oe	**1**	
		Communication seen in one of 3(b) 4(b)(ii) 5(b) 5(c)	**1**	
		Total	**24**	