Mark Scheme (Results)

November 2009

GCSE Mathematics (Modular) - 2381
Paper: 5383H/10

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Question		Working	Answer	Mark	Notes
1			8	2	M1 for 400 ÷ 50 A1 for 8
2	(a)		43°	1	B1 cao
	(b)			1	B1 for corresponding angles **or** F angles **or** correct full reasons if other method used
3	(a)	–1, (1), 3, (5), 7, 9	–1, (1), 3, (5), 7, 9	2	B2 for 4 values correct (B1 for 2 or 3 values correct)
	(b)		Line drawn	2	M1 for plotting at least 5 of their points correctly **or** single straight line with positive gradient passing thro' (0,3) from x=-2 to x=3 **or** single straight line of gradient 2 from x=-2 to x=3 **or** correct straight line that passes through 3 correct points A1 cao for straight line from at least (-2,-1) to (3,9)
4	(a)	$x^2 + 3x + x + 3$	$x^2 + 4x + 3$	2	M1 for 4 terms correct with or without signs or 3 correct **in each case there must be a maximum of 4 terms** (the terms may be in an expression or table) **or** $x(x + 3) + 1(x + 3)$ **or** $x(x + 1) + 3(x + 1)$ A1 cao
	(b)		$(y + 5)(y - 3)$	2	M1 for $(y \pm 5)(y \pm 3)$ A1 cao NB : Use isw if candidate goes onto solve equation
5	(a)		3^6	1	B1 accept $3^{4 + 2}$
	(b)		5^3	1	B1 accept $5^{5 - 2}$

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Question	Working	Answer	Mark	Notes
6	93 000 000 ÷ 250 000 372	3.72×10^2	3	M1 for $9.3 \times 10^7 \div 250\,000$ oe (condone any error converting into or out of standard form) A2 for 3.72×10^2 (A1 for 372) SC : If no marks awarded then award B1 for digits 372 or 93 000 000 seen or 2.5×10^5 seen
7	$\dfrac{2x \times x - 7}{x(2x-3)}$	$\dfrac{2x^2 - 7}{x(2x-3)}$	2	M1 for a correct common denominator eg $x(2x-3)$oe or $x(2x-3)^2$ oe A1 for $\dfrac{2x^2-7}{x(2x-3)}$ or $\dfrac{2x^2-7}{2x^2-3x}$ as final answer
8	$100x = 25.252525...$ $x = 0.252525...$ $99x = 25 \quad x = \dfrac{25}{99}$	$\dfrac{25}{99}$	2	M1 for valid method eg $100x = 25.2525...$, $x = 0.2525...$ and clear intent to subtract **OR** $1000x = 252.525...$, $10x = 2.525...$ and clear intent to subtract A1 for valid argument leading to $\dfrac{25}{99}$ **Alternative method** for long division M1 for identifying 52 and 25 as remainders A1 for correct statement
9 (a)(i)		90	1	B1 cao for 90
(ii)			1	B1 for angle between tangent and radius is 90°
(b)	Angle *ABO* = *x* Angle *ABC* = 90 + *x* *y* = 180 – (*x* + 90 + *x*)	90 – 2*x*	2	M1 for identifying angle ABO as *x* **or** angle BOC as 2*x* these could be seen on the diagram or in working A1 for 90 – 2*x* oe for example, 180 – (90 + 2*x*)

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