

# Mark Scheme (Results)

November 2009

GCSE

GCSE Mathematics (Modular) - 2381

Paper: 5383H/ 10

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5383H/10				
Question	Working	Answer	Mark	Notes
1		8	2	M1 for $400 \div 50$ A1 for 8
2 (a)		$43^\circ$	1	B1 cao
(b)			1	B1 for corresponding angles <b>or</b> F angles <b>or</b> 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 <b>or</b> single straight line with positive gradient passing thro' (0,3) from $x=-2$ to $x=3$ <b>or</b> single straight line of gradient 2 from $x=-2$ to $x=3$ <b>or</b> 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 <b>in each case there must be a maximum of 4 terms</b> (the terms may be in an expression or table) <b>or</b> $x(x + 3) + 1(x + 3)$ <b>or</b> $x(x + 1) + 3(x + 1)$ 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 $5^{5-2}$

5383H/10				
Question	Working	Answer	Mark	Notes
6	$93\,000\,000 \div 250\,000$ 372	$3.72 \times 10^2$	3	M1 for $9.3 \times 10^7 \div 250\,000$ oe (condone any error converting into or out of standard form) A2 for $3.72 \times 10^2$ (A1 for 372) SC : If no marks awarded then award B1 for digits 372 or 93 000 000 seen or $2.5 \times 10^5$ seen
7	$\frac{2x \times x - 7}{x(2x - 3)}$	$\frac{2x^2 - 7}{x(2x - 3)}$	2	M1 for a correct common denominator eg $x(2x - 3)$ oe or $x(2x - 3)^2$ oe A1 for $\frac{2x^2 - 7}{x(2x - 3)}$ or $\frac{2x^2 - 7}{2x^2 - 3x}$ as final answer
8	$100x = 25.252525\dots$ $x = 0.252525\dots$ $99x = 25 \quad x = \frac{25}{99}$	$\frac{25}{99}$	2	M1 for valid method eg $100x = 25.2525\dots$ , $x = 0.2525\dots$ and clear intent to subtract <b>OR</b> $1000x = 252.525\dots$ , $10x = 2.525\dots$ and clear intent to subtract A1 for valid argument leading to $\frac{25}{99}$ <b>Alternative method</b> 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 $90^\circ$
(b)	Angle $ABO = x$ Angle $ABC = 90 + x$ $y = 180 - (x + 90 + x)$	$90 - 2x$	2	M1 for identifying angle ABO as $x$ <b>or</b> angle BOC as $2x$ these could be seen on the diagram or in working A1 for $90 - 2x$ oe for example, $180 - (90 + 2x)$



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