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Summer 2010

GCSE

GCSE Mathematics (Modular) - 2381
Paper: 5381H/10

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5383H/10				
Question	**Working**	**Answer**	**Mark**	**Notes**
1	$(40 \div 5) \times (30 \div 10) \times (30 \div 6)$	120	3	M1 for $40 \div 5$ **or** $30 \div 10$ **or** $30 \div 6$ **or** $40 \div 10$ **or** $30 \div 5$ or at least two of 8, 3, 5 seen. M1 (dep) for $(40 \div 5) \times (30 \div 10) \times (30 \div 6)$ **or** $(40 \div 10) \times (30 \div 6) \times (30 \div 5)$ **or** "8"×"5"×"3" **or** "4"×"5"×"6" A1 cao **OR** M1 for $6 \times 10 \times 5$ **or** 300 **or** $30 \times 30 \times 40$ **or** 36000 M1 (dep) for $(30 \times 30 \times 40) \div (6 \times 10 \times 5)$ or "36000" ÷ "300" A1 cao
2 (a)		$4a - 3b$	2	B2 cao (B1 for $4a$ or $-3b$ seen)
(b)		$4x - 8$	1	B1 cao
3		8.87605 (042.)	2	M1 for 42.25 seen **or** 4.76 seen A1 for 8.87605 (042…) SC: B1 for $\frac{4225}{476}$ **or** $8\frac{417}{476}$ **or** answer in range 8.8-8.9 inclusive

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Question	**Working**	**Answer**	**Mark**	**Notes**
4 (i)		7^8	2	B1 for 7^8, accept 7^{6+2}
(ii)		7^4		B1 for 7^4, accept 7^{9-5}
5	7850×4	31400	2	M1 for 7850×4 A1 cao
6	$\left(6\times10^7\right)\div\left(3\times10^4\right)$	2×10^3	2	M1 for $\left(6\times10^7\right)\div\left(3\times10^4\right)$ **or** "60000000"÷"30000" A1 for 2×10^3 or 2000
7		C, B, A, D	2	B2 all correct (B1 for 2 or 3 correct)
8	$(180-100)\div 2 = 40$ $90-40=50$	50	3	M1 for identifying angle *OAC* as 90^o **or** angle *BAO* or angle *ABO* as 40^o, could be marked on the diagram **or** $(180\text{-}100)\div 2$ A1 cao B1 for (base angles of an) isosceles triangle (are equal) **and** angles in a triangle add up to 180^o **and** angle between tangent and radius is 90^o

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Question	**Working**	**Answer**	**Mark**	**Notes**
9	$\frac{3x^2+x-4}{2x^2-2x} = \frac{(3x+4)(x-1)}{2x(x-1)}$	$\frac{3x+4}{2x}$	3	M1 for $(3x+4)(x-1)$ M1 for $2x(x-1)$ A1 cao
10	$n+n+1+n+2=3n+3$	Proof	3	M1 for three consecutive numbers expressed algebraically, eg. $n, n+1, n+2$ oe M1(dep) for "n"+"n+1"+"n+2" A1 for "3n + 3" **and** correct reasoning, e.g. '$3n+3$ is divisible by 3 as $3n+3=3(n+1)$' or '$3n+3$ is divisible by 3 as both $3n$ and 3 are divisible by 3' or '3 is a factor of $3n+3$' or '$3n+3=3(n+1)$' or '$(3n+3) \div 3 = n+1$'

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