

SIMPLE ALGEBRA, RATION AND SEQUENCES - GCSE EDEXCEL (Higher)
Marking Schem

PAPER: 1MA0_1H					
Question		Working	Answer	Mark	Notes
1	(a)		331.705	1	B1 cao
	(b)		179300	1	B1 cao
2		$\begin{array}{r} 5 525 \\ 5 105 \\ 3 21 \\ 7 \end{array}$	$3 \times 5 \times 5 \times 7$	3	M1 for continual prime factorisation (at least first 2 steps correct) or first two stages of a factor tree correct M1 for fully correct factor tree or list 3, 5, 5, 7 A1 $3 \times 5 \times 5 \times 7$ or $3 \times 5^2 \times 7$
3 QWC			No + explanation	3	M1 for $500 \times 9 \times 10^{-3}$ oe A1 for 4.5 C1 (dep M1) for correct decision based on comparison of their paper height with 4 OR M1 for $4 \div 500$ oe A1 for 0.008 C1 (dep M1) for correct decision based on comparison of their paper thickness with 0.009 OR M1 for $4 \div (9 \times 10^{-3})$ oe A1 for 444(.4...) C1 (dep M1) for correct decision based on comparison of their number of sheets of paper with 500

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4		- 5, 0.2, 0.5, 1	2	M1 for either 5^{-1} or 5^0 evaluated correctly A1 for a fully correct list from correct working, accept original numbers or evaluated (SC B1 for one error in position or correct list in reverse order)
5	(a)		1	B1 for $\frac{2}{21}$
	(b)		2	M1 for attempting to use a suitable common denominator with at least one of the two fractions correct A1 for $\frac{4}{15}$ oe
6			4	M1 for a method to either find the exact or approximate number of seconds in one day, e.g. $24 \times 60 \times 60$ (=86400) or the number of minutes in 2014 seconds, e.g. $2014 \div 60$ or $2000 \div 60$ (≈ 30) M1 for a correct method to find the number of prizes; eg. ' $24 \times 60 \times 60$ ' $\div 2014$ oe or $60 \div "30" \times 24$ oe B1 for rounding at least one appropriate value in the working to 1 sf, e.g. 24 rounded to 20 or 2014 rounded to 2000 or 86400 rounded to 90000 C1 (dep on M2) for answer in 35 – 50 clearly identified
7	(a)		1	B1 cao
	(b)		2	M1 for collecting the terms in x or the number terms in an equation, eg. $5x - x + 4 = 14$ or $5x = 14 - 4 + x$ A1 for 2.5 oe (accept $\frac{10}{4}$)

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8	(a)	$x < 7$	2	M1 for isolating term in x eg $3x \geq 16 + 5$ or $3x < 21$ or for $(x =) 7$ or $x > 7$ etc A1 cao
	(b)	$\frac{7}{5}$	3	M1 for multiplying by 4 or adding $\frac{w}{4}$ or subtracting $\frac{11}{4}$ or subtracting 1 [all applied to both sides and as a first step] M1 for isolating terms in w on one side and number terms on the other side of the equation A1 for $\frac{7}{5}$ oe
9	(a)	x^{12}	1	B1 cao
	(b)	2	1	B1 cao
	(c)	18	1	B1 cao
	(d)	example given	1	B1 for stating a value of n for which $6n + 1$ is not prime eg 4, 8, 9, 14, 19, ... ,1000 etc
10	(a)	$3n - 1$	2	B2 for $3n - 1$ oe (B1 for $3n + k$, k an integer $\neq -1$ or absent)
	(b)	Yes	2	M1 for $3n - 1 = 299$ ft if B1 earned in (a) A1 for eg Yes and $n = 100$ oe
	(c)	$3(n+1) - 1$	1	B1 oe eg $3n + 2$ or ft (a) providing at least B1 earned

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Question		Working	Answer	Mark	Notes
11	(a)		40 100	3	M1 for method to find unit weight eg $60 \div 3 (= 20)$ M1 for complete method to find weight of one of the other ingredients eg “20” $\times 2 (= 40)$ or “20” $\times 5 (= 100)$ A1 cao
	(b)		1.44	3	M1 for a complete method to work out the weight of nuts needed eg $300 \div (3 + 2 + 5) \times 3 (= 90)$ or $300 \div (60 + “40” + “100”) \times 60 (= 90)$ M1 for a complete method to work out the cost eg $(800 \div 500) \times “90” (= 144)$ A1 cao