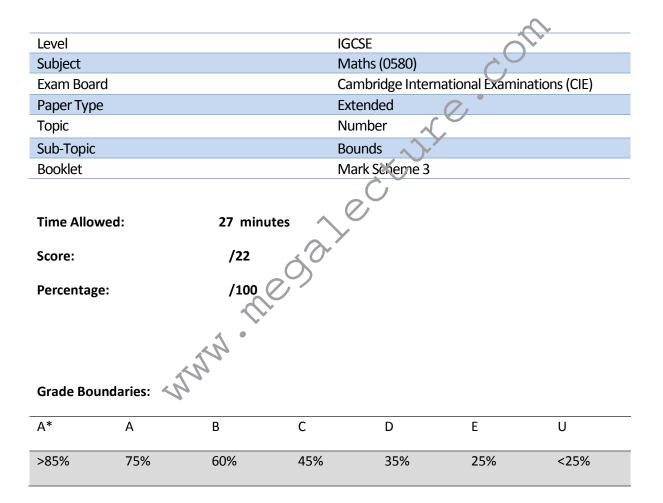


Bounds

Mark Scheme 3



1 (a)	(£) 2.37 or 2.371 to 2.372 www 2	2	M for 34.95 ÷ 1.17 implied by 29.87or 29.9 or SC1 for 2.77 or 2.78 or 2.775
(b)	154 days 4 hours cao	3	M1 for $4.07 \times 10^{12} \div (1.1 \times 10^9)$ implied by figs 37 or 154. () A1 for 3700 seen or 3.7×10^3 seen or $154 \frac{1}{6}$ oe or 154 rem 4
(c) (i)	9.25	1	
(ii)	Lower = 51.3375 final answer Upper = 52.8275 final answer	1 1	After 0 scored SC1 for answers reversed or 9.35 and 5.65 seen or 51.3375 and 52.8275 seen

2	(a) (i) $2 \times 3 \times 3 \times 7$ oe	2	M for prime factors of 2,3,3,7 shown condone 1('s) shown as well for method only
	(ii) 18	1	
	(iii) 504	2	M1 for other multiples of 504 or $2 \times 2 \times 2 \times 3 \times 3 \times 7$ oe shown If (ii) and (iii) both correct but reversed allow SC1
	(b) 3.028 or 3.029 cao	4	B3 for 3.0289(85) or M1 for their 105/their 34 (their 105 in range 104 to 106 and their 34 in range 33 to 35) and B1 for 104.5 or 34.5 or 34.499 selected
	(c) πr^2 their h = their V	M1	Where V is in range 540 to 560 and h is in range 11 to 13
	$(r^2 =) \frac{\text{their } V}{\pi \times \text{their } h}$	M1	Implies previous method (15.36 implies M2) If using 545 and 12.5 then 13.88 (leading to 3.73) If using 550 and 12 then 14.59 (leading to 3.82)
	Sq root	M1	Dep on M2, can be implied from answers
	Selects 555 or 554.99 and 11.5	B 1	Indep
	3.919 cao	A1	If trials then 5 or 0

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