

1	(a)	$3.0 \times 10^9$	P1	for correct process, eg $10^5 \times 365 \times 81$ or for a correct answer not written in standard form, eg 2956500000 or $2.9(565) \times 10^9$ where $n \neq 9$ oe	Values may be rounded. Allow 350, 360, 366, 370, 400 and 80, 100
			A1	for an answer in the range $2.8 \times 10^9$ to $4.0 \times 10^9$	
	(b)	$4.5 \times 10^{-11}$	P1	for correct process, eg $\frac{90}{2 \times 10^{12}}$ or for correct answer not written in standard form, eg $45 \times 10^{-12}$ or $0.45 \times 10^{-10}$ or $4.5 \times 10^n$ where $n \neq -11$	Allow $90 \div 2 \times 10^{12}$
			A1	cao	
2	(a)	0.00163	B1	cao	
	(b)	$4.38 \times 10^5$	B1	cao	
	(c)	$2.4 \times 10^{-1}$	M1	for $4 \times 6 \times 10^{3-5}$ or 0.24 oe eg $24 \times 10^{-2}$ or $2.4 \times 10^n$ where $n \neq -1$	
			A1	cao	
3	(a)	0.000675	B1	cao	If the answer (for 2 marks) is seen in working and then rounded or truncated, award full marks.
	(b)	$6.592 \times 10^5$	M1	for $10.5472 \times 10^3$ oe or $1.6 \times 10^8$ oe or $2.575 \times 10^{-1}$ oe or for $6.592 \times 10^n$ where $n \neq 5$ or for $6.59 \times 10^5$ or for $6.6 \times 10^5$ or for 659200 oe	
			A1	cao	