Mark scheme

Calculating in standard form

Mathematics 0580 · Questions from Paper 1, Paper 2 and Paper 4

Total marks

22

MARKS FOR EACH QUESTION

1	2	3	4	5	6	7	8	9	10	Total
1	2	2	2	2	2	3	2	2	4	**22**

Question 1 **[1]**

1	2.56×10^{12}	**1**	

Question 2 **[2]**

2	2.4×10^{8}	**2**	**B1** for 240 000 000 oe or **B1** for $k \times 10^{8}$ or 2.4×10^{k}

Question 3 **[2]**

3	7.36×10^{7}	**2**	**B1** for figs 736

Question 4 **[2]**

4	1.98×10^{100}	**2**	**B1** for 200×10^{98} or 0.02×10^{100} or answer with figs 198

Question 5 **[2]**

5	2.03×10^{2} cao	**2**	**B1** for 203 oe If 0 scored, **SC1** for writing *their* ordinary number correctly in standard form

STEM | Exam Builder

Question 6 **[2]**

6	2.31×10^{p}	**2**	**B1** for $21\times10^{p-1}$ or 0.21×10^{p} or answer with figs 231

Question 7 **[3]**

7(a)	7.09×10^{-3}	**1**	
7(b)	1.6×10^{9}	**2**	**B1** for 16×10^{8} oe

Question 8 **[2]**

8	1.26×10^{25} or 1.257×10^{25} to 1.258×10^{25}	**2**	**M1** for $\frac{1000}{7.95\times10^{-23}}$ oe or **B1** for 1.26×10^{k} or 1.257×10^{k} to 1.258×10^{k}

Question 9 **[2]**

9	$5(.00) \times 10^{5}$	2	**SC1** for 5×10^{k} or 500 000 on answer line

Question 10 **[4]**

10 **(a)**	2×10^{10}	**2**	**B1** for 20×10^{9} or 20 000 000 000
(b)	1.25×10^{-1}	**2**	**B1** for 0.125 oe

STEM | Exam Builder