7. Mark schemes for Paper 1: arithmetic

Qu.	Requirement	Mark	Additional guidance
1	1,087	1m	
2	350	1m	
3	326	1m	
4	459	1m	
5	1,221	1m	
6	19	1m	
7	97,637	1m	
8	405	1m	
9	24	1m	
10	2,637	1m	
11	568	1m	
12	3,500	1m	
13	41,200	1m	
14	9.125	1m	
15	162	1m	
16	42.294	1m	
17	53.18	1m	
18	110,457	1m	
19	19	1m	
20	0.09	1m	
21	2.85	1m	
22	110	1m	

Qu.	Requirement	Mark	Additional guidance
23	Award **TWO** marks for the correct answer of 3,266 If the answer is incorrect, award **ONE** mark for the formal method of long multiplication with no more than **ONE** arithmetical error, e.g. • 71 × 46 = 426 + 2840 = 3260 *(error)* **OR** • 71 × 46 = 426 + 2440 = 2866 *(error)*	**Up to 2m**	Working must be carried through to reach a final answer for the award of **ONE** mark. **Do not** award any marks if the error is in the place value, e.g. the omission of the zero when multiplying by tens: 71 × 46 = 426 + 284 = 710 *(place value error)*
24	$1\frac{2}{7}$ **OR** $\frac{9}{7}$	**1m**	Accept equivalent fractions or the **exact** decimal equivalent, e.g. $1.\overline{285714}$ (accept any unambiguous indication of the recurring digits). **Do not** accept rounded or truncated decimals.
25	360	**1m**	**Do not** accept 360%
26	91.5	**1m**	
27	$\frac{1}{4}$	**1m**	Accept equivalent fractions or an **exact** decimal equivalent, e.g. 0.25

Qu.	Requirement	Mark	Additional guidance
28	Award **TWO** marks for the correct answer of 25 If the answer is incorrect, award **ONE** mark for the formal methods of division with no more than **ONE** arithmetical error, i.e. • long division algorithm, e.g. 25r2 29 ⟌ 725 – 580 (20 × 29) 145 – 116 (4 × 29) 31 (*error*) – 29 (1 × 29) 2 **OR** 24 (*error*) 29 ⟌ 725 – 58 (2 × 29) 145 – 145 (5 × 29) 0 • short division algorithm, e.g. 2 6 (*error*) 29 ⟌ $72^{14}5$	**Up to 2m**	Working must be carried through to reach a final answer for the award of **ONE** mark. Short division methods must be supported by evidence of appropriate carrying figures to indicate the use of a division algorithm, and be a complete method. The carrying figure must be less than the divisor.
29	66	**1m**	**Do not** accept 66%

Qu.	Requirement	Mark	Additional guidance
30	Award **TWO** marks for the correct answer of 203,794 If the answer is incorrect, award **ONE** mark for the formal method of long multiplication with no more than **ONE** arithmetical error, e.g. • 6574 × 31 = 6574 + 143790 (*error*) = 150364 **OR** • 6574 × 31 = 6574 + 197220 = 193794 (*error*)	**Up to 2m**	Working must be carried through to reach a final answer for the award of **ONE** mark. **Do not** award any marks if the error is in the place value, e.g. the omission of the zero when multiplying by tens: 6574 × 31 = 6574 + 19722 (*place value error*) = 26296
31	$2\frac{1}{10}$ **OR** $\frac{21}{10}$	**1m**	Accept equivalent fractions or an **exact** decimal equivalent, e.g. 2.1 **Do not** accept $1\frac{11}{10}$

Qu.	Requirement	Mark	Additional guidance
32	Award **TWO** marks for the correct answer of 26 If the answer is incorrect, award **ONE** mark for the formal methods of division with no more than **ONE** arithmetical error, i.e. • long division algorithm, e.g. 28r14 43 | 1118 – 645 (15 x 43) 573 *(error)* – 430 (10 x 43) 143 – 129 (3 x 43) 14 **OR** 25r23 43 | 1118 – 88 *(error)* (2 x 43) 238 – 215 (5 x 43) 23 • short division algorithm, e.g. 2 5 *(error)* 43 | 111 ^{25}8	**Up to 2m**	Working must be carried through to reach a final answer for the award of **ONE** mark. Short division methods must be supported by evidence of appropriate carrying figures to indicate the use of a division algorithm, and be a complete method. The carrying figure must be less than the divisor.
33	$\frac{1}{5}$	**1m**	Accept equivalent fractions or an **exact** decimal equivalent, e.g. 0.2
34	56	**1m**	
35	$\frac{11}{12}$	**1m**	Accept equivalent fractions or the **exact** decimal equivalent e.g. $0.91\overline{6}$ (accept any unambiguous indication of the recurring digit). **Do not** accept rounded or truncated decimals.
36	53	**1m**	