Mark scheme

Averages and range

Mathematics 0580 · Questions from Paper 1, Paper 2, Paper 3 and Pape…

Total marks

44

MARKS FOR EACH QUESTION

1	2	3	4	5	6	7	8	9	10	Total
1	2	2	3	3	4	4	6	7	12	**44**

Question 1 [1]

1	64	**1**	

Question 2 [2]

2(a)	22	**1**	
2(b)	30	**1**	

Question 3 [2]

3(a)	Flix AND higher mean oe	**1**	
3(b)	Movie Scene AND higher range oe	**1**	

Question 4 [3]

4	3.06 or 3.057…	**3**	**M1** for $(1 \times 7) + (2 \times 5) + (3 \times 8) + (4 \times 9) + (5 \times 6)$ **M1dep** for *their* $\sum fx \div (7+5+8+9+6)$

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Question 5 **[3]**

5	30	**3**	**M1** for $\frac{391+n+n-1}{3}=5n$ oe **M1** for correct first step for solving *their* equation e.g. $391+n+n-1=3\times5n$, $\frac{390+2n}{3}=5n$

Question 6 **[4]**

6(a)	2	**1**	

6(b)	2.25	**3**	**M1** for [3×0] + 1×1 + 7×2 + 8×3 + [0×4] + [0×5] + 1×6 oe or for 45 **M1 dep** for $\frac{their\Sigma fx}{20}$ dep on first M1

Question 7 **[4]**

7	$\frac{68+2x}{10}=8$ or better	**M1**	
	$x = 6$	**A1**	
	Lower quartile = 6.5 or 6.75 or 7 or upper quartile = 9	**B1**	
	2 or 2.25 or 2.5 nfww	**A1**	

Question 8 **[6]**

8(a)	8 10 15 16 17	**3**	**B1** for 8 as lowest and 17 as highest **B1** for 15 as the median of *their* integers **B1** for two other integers such that the total of all 5 of *their* integers is 66 and there are no repeated integers.
8(b)	32	**3**	**M1** for 4 × 17 soi **M1** for 5 × 20 soi

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Question 9 **[7]**

9 (a) (i)	4	1	
(ii)	5	1	
(iii)	4.75	3	**M1** for $1\times2+1\times3+17\times4+12\times5+6\times6+3\times7$ condone one slip **then** **M1** dependent result (190) ÷ 40
(b)	$\frac{190+3n}{40+n}$	2	**SC1** for their $190 + 3n$

Question 10 **[12]**

10(a)(i)	25	**1**	
10(a)(ii)	10 nfww	**2**	**B1** for [lq =] 22 or [uq =] 32
10(a)(iii)	27	**1**	
10(a)(iv)	6	**2**	**B1** for 114 written
10(b)(i)	27.9 or 27.91 to 27.92 nfww	**4**	**M1** for mid-values **M1** for $\sum fx$ where x lies within or on boundary of correct interval **M1 dep** $\sum fx \div 120$ dep on second M1
10(b)(ii)	7.6	**2**	**M1** for $\frac{18}{10}$ oe or $\frac{38}{20}$ oe or **B1** for [multiplier] 4 or ¼

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