Dulwich College Shanghai

IGCSE - Individual Data Markscheme

0 min
0 marks

1.	(i)	**1**	B1
	(ii)	**3**	B1
	(iii)	$\frac{29 + \text{their } k + m}{10} = 3.6$ o.e.	M1
		(m =) 4	A1
	(iv)	**9**	B1
			[5]

2.	(i)	$\frac{54 + 21 + 8a + 45}{9 + 3 + a + 5} = 7.2$ o.e. Accept products shown	M1
		120 + 8a = 122.4 + 7.2a o.e. Dep on previous M1 and a denominator of the form integer + *a* – deals with fraction correctly but not where *n* used in denominator.	M1
	(ii)	(a) = **3** c.a.o. www 3	A1
	(iii)	**20** 17 + their (a), provided (a) is positive integer	B1ft
		7 c.a.o.	B1
			[5]

3.	(i)	**6**	B1
	(ii)	**4.5**	B1
	(iii)	$(1 \times 1 + 2 \times 2 + 4 \times 3 + 7 \times 4 + 4 \times 5 + 8 \times 6 + 2 \times 7)$ (127) Allow 1 slip	M1
		$\div 28$ dep on 1st M1	M1dep
		4.54 www 3 4.53571…	A1
	(iv)	$\frac{4}{28} \times \frac{3}{27}$ Accept all **probabilities** as fracts/dec/% –1 once for words or 2 sf, do not accept ratios i.s. cancelling after correct answer.	M1
		$\mathbf{\frac{1}{63}}$ o.e. www2 e.g. ($\frac{12}{756}$, 0.0159 etc)	A1
	(v)	$\frac{4}{21} \times \frac{3}{20}$	M1
		$\mathbf{\frac{1}{35}}$ o.e. www2 e.g. ($\frac{12}{420}$, 0.0286 etc)	A1
	(vi)	$\frac{24}{28} \times \frac{23}{27} \times \frac{4}{26}$	M1
		$\mathbf{\frac{92}{819}}$ o.e. www2 e.g. ($\frac{2208}{19656}$, 0.112)	A1

[11]

4.	(a)	(i)	30	B1
		(ii)	30, 30.5, 31 Penalty 1 for each extra value	B1 B1
				B1
			Ignore repeated values	
		(iii)	$\frac{10\times30+7\times31+x\times32}{10+7+x}=30.65$	M1
			correct clearance of fraction Dep on M1 e.g. $517 + 32x = 521.05 + 30.65x$ o.e.	M1
			3 c.a.o www3	A1
				[7]

5.	(a)	**1**	B1
	(b)	**2.5** o.e.	B1
	(c)	**2.96** c.a.o. If B0**,** M1 for $15 \times 1 + 10 \times 2 + 7 \times 3 + 5 \times 4 + 6 \times 5 + 7 \times 6$ (allow one slip) implied by 148 seen Ignore subsequent rounding	B2
	(d)	60×2.95 (= 177)	M1
		their 177 – their 148 (or 50 × their 2.96) **Dependent** on first **M** and <u>only if</u> positive **or** M1 for	M1
		(Mean of new rolls =) **2.9** c.a.o. www3 $\frac{\text{their}\,148(50\times\text{their }2.96)\ +x\ (\text{or}\,10x)}{60}=2.95$ then M1 for x(or $10x$) = 60 × 2.95 – their 148 (or 50 × their 2.96) and <u>only if</u> positive	A1
			[7]