

Edexcel GCSE

Mathematics 2381

Paper 5381H/06

November 2008

advancing learning, changing lives

Mark Scheme

5381H/06 - Section A				
Question	Working	Answer	Mark	Notes
1 (a)	$1 - (0.3 + 0.2 + 0.1)$	0.4	2	M1 for $1 - "(0.3 + 0.2 + 0.1)"$ A1 for 0.4 oe (watch out for answers given only in table)
(b)	0.2×50	10	2	M1 for 0.2×50 A1 for cao SC B1 for 10/50
2 (a)		Overlapping intervals Time frame No 6+ (or none)	2	B2 for 2 correct 731607245 (B1 for 1 correct)
(b)		Not representative of all ages Students use computers more	1	B1 for one acceptable reason
3	$(6 \times 5) + (11 \times 15) + (8 \times 25) + (5 \times 35) = 570$ " 570 " \div " $(6+11+8+5)$ "	19	4	M1 for use of fx with x consistent within intervals (including end points) accept one error M1 (dep) for use of midpoints M1 (dep on 1st M1) for use of $\Sigma fx / \Sigma f$ A1 cao
4		2 comparisons	2	B1 for a comparison of a specific value, e.g. John's median is greater than Peter's median B1 for a comparison of spread, e.g. John's range is wider than Peter's range (watch out for two comparisons given together)

5381H/06 - Section A				
Question	Working	Answer	Mark	Notes
5	frequency densities 0.4, 0.6, 1.0, 0.6, 0.2	bars 3cm, 1cm high respectively	2	M1 for consistent correct use of fd or $1\text{cm}^2=2$ (may be implied by one correct bar) A1 for 2 correct bars

5381H/06 - Section B				
Question	Working	Answer	Mark	Notes
1 (a)		(67, 50), (70, 50), (75, 40), (80, 25)	2	B2 for 4 points plotted correctly (allow ± 2 mm tolerance) (B1 for 2 or 3 points plotted correctly)
(b)		As the price increases the number of cameras sold decreases	1	B1 for decrease in number sold with price. (accept negative correlation)
(c)		line of best fit	1	B1 for line within given limits passing between (70, 40) & (70, 55) and between (80, 15) & (80, 30)
(d)		35 – 39	1	B1 for 35 – 39 or ft their line of best fit from 74 (allow ± 2 mm tolerance)
2 (a)		88	1	B1 for value in range 87 – 89
(b)		38	1	B1 for value in range 38 -39
(c)	57 – 20	37	2	B2 for 32 – 40 (B1 for using graph at 25 and 75; may be indicated by marks at 25 and 75)
3		Reason	1	B1 for indication of not enough trials
4 (a)		$\frac{4}{5}$ ($\frac{7}{10}$, $\frac{3}{10}$) ($\frac{1}{10}$, $\frac{9}{10}$)	2	B2 cao (B1 for 2 correct from $\frac{4}{5}$, ($\frac{7}{10}$, $\frac{3}{10}$), ($\frac{1}{10}$, $\frac{9}{10}$))
(b)	$(\frac{1}{5} \times \frac{7}{10}) + (\frac{4}{5} \times \frac{1}{10})$	$\frac{11}{50}$	3	M1 for $\frac{1}{5} \times \frac{7}{10}$ or $\frac{4}{5} \times \frac{1}{10}$ oe selected M1 for $(\frac{1}{5} \times \frac{7}{10}) + (\frac{4}{5} \times \frac{1}{10})$ oe A1 for $\frac{11}{50}$ oe