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# Mark Scheme (Results)

## November 2009

GCSE

GCSE Mathematics (Modular) - 2381
Paper: 5381F/5A

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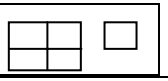
|---|---|---|---|---|
| **Question** | **Working** | **Answer** | **Mark** | **Notes** |
| 1 (a) | | 24 | 1 | B1 for 24 (accept twenty four) |
| (b) | | 12 | 1 | B1 for 12 (accept twelve) |
| (c) | | April  | 1 | B1 cao |
| 2 (a) | | S | | B1 for S anywhere between 0 and 0.25 inclusive on the probability scale. |
| (b) | | 0 1 F | | B1 for F within 1 cm of the end of the scale at 1 |
| (c) | | 0 1 | | B1 for H within a tolerance of ± 0.5cm of 0.5 on the scale |
| | | 0 H 1 | | |
| 3 | | Missing Flavour<br>Missing 'Frequency'<br>Missing scale | 2 | B1 any one<br>B1 any second one<br>[Note: The corrections may be made on the diagram only – this is acceptable.] |
| 4 | 40 cars = 360°<br>Blue 90°<br>Red 36°<br>Silver 162°<br>Black 54°<br>Green 18° | Correctly drawn pie chart<br>Fully labelled | 3 | B3 for a fully correct and labelled chart (tolerance of ± 2° on each angle)<br>[B2 for correct pie chart (± 2° tol) with no or incorrect labels. OR for 2 or 3 accurate sectors (± 2°), NOT including the given 'blue' sector and correctly labelled ]<br>[B1 for one extra, accurate and correctly labelled sector OR a for a clear method (e.g 360 ÷40) to find the size of the angles ; this may be implied by the sight of a correct angle in the table] |

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| **Question** | | **Working** | **Answer** | **Mark** | **Notes** |
| 5 | (a) | 8 × 70 = 560<br>OR 8 × 60 = 480 and<br>8 × 80 = 640 and mid-interval found | The mid-interval value 70 multiplied by the frequency 8 gives 560 oe<br>eg. 8 × 70 = 560 | 1 | B1 for correct explanation which explicitly states the 70 and the 8<br>Accept 8 × 70 (= 560) alone |
| | (b) | $8\times 70+12\times 90+6\times 110+14\times 130$ = 4120<br>$'4120'\div''40''$ =103 | 103 | 3 | M1 for *fx*, *x* used consistently in the interval (accept the use of the upper limits). Allow 1 slip<br>[This maybe implied by sight of 3 or 4 correct values from 560, 1080, 660 and 1820<br>Note: If there is no working after this, M1 can still be awarded]<br>M1 (dep) for $\frac{\Sigma f\ ''x''}{''\Sigma f''}$<br>"Σ*f*" must be seen to be the sum of 8, 12, 6 and 14]<br>A1 cao |

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