2009 June

1380/1F					
Question		Working	Answer	Mark	Notes
1	(a)		8	1	B1 cao
	(b)		3	1	B1 cao
	(c)		3 circles 2.5 circles	2	B1 cao B1 cao
2		$30-(16+9)$	5	2	M1 30 – "(16 + 9)" or "30 − 16" − 9 or "30 − 9" − 16 A1 cao
3	(a)		30	1	B1 for 30
	(b)		5	1	B1 for 5
4	(a)		Correct line	1	B1 For a single line of length in the range 6.8cm to 7.2cm drawn with or without using the given point P
	(b)		Correct point	1	B1 for point Q identified on their line within the range 2.8 cm to 3.2 cm from *P*
5	(a)		116	1	B1 for 116 [accept 114 if 116 seen on the dotted line in the sequence]
	(b)		112	1	B1 cao
	(c)		it is odd (and all the terms are even)	1	B1 for a correct reason
6	(a)		16	1	B1 cao
	(b)		12 cm^2	2	B1 for 12 cao, B1 (indep) for cm^2
	(c)		15	2	M1 for 5 × 3 A1 cao [SC: B1 for 10, 13 or 14]

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Question		Working	Answer	Mark	Notes
7	(a)		08 30	1	B1 for 08 30 oe
	(b)		17	1	B1 cao
	(c)		10 15	1	B1 for 10 15 oe
8	(a)		Four thousand, one hundred and seventeen	1	B1 for four thousand, one hundred and seventeen oe
	(b)		4100	1	B1 for 4100 in figures or words or 41 hundred
9	(a)		8	1	B1 cao
	(b)		**C**	1	B1 for C or pyramid
10	(a)		58	1	B1 57 to 59 (not inclusive)
	(b)		3.6	1	B1 3.5 to 3.7 (not inclusive)
	(c)	$7-3.6$	3.4	1	B1 for 3.3 to 3.5 (not inclusive) or ft on 7 – "(b)" provided "b" < 7
11	(a)		(4, 6)	1	B1 cao
	(b)		(0, 3)	1	B1 cao
	(c)	$\left(\frac{0+4}{2}, \frac{3+6}{2}\right)$	(2, 4.5)	2	B2 for (2, 4.5) ±0.2 on each coordinate [B1 for (2, b) b ≠ 4.5 or (a, 4.5) a ≠ 2 or (4.5, 2) or $\left(\frac{0+4}{2}, \frac{3+6}{2}\right)$ seen ±0.2 on each coordinate]

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Question		Working	Answer	Mark	Notes
12	(a)		-4	1	B1 for -4^oC or Edinburgh
	(b)		7	1	B1 for 7 (accept -7)
	(c)		2	1	B1 for 2 or Leeds
13	(a)		Impossible	1	B1 cao
	(b)		Even	1	B1 cao
	(c)		Certain	1	B1 cao
14	(a)		12	1	B1 cao
	(b)		24	1	B1 cao
	(c)		49	1	B1 cao
15	(a)		$4x$	1	B1 for $4x$ (accept $4 \times x$, $x \times 4$, $x4$)
	(b)		y^3	1	B1 cao
	(c)		$2x + 8y$	2	B2 for $2x + 8y$ oe [B1 for $2x$ or $8y$ seen] {Note: $-8y$ seen with no working gets B0 $4x + 2x = 6x$ gets B0}
16	(a)		Diagram *(overlay)*	2	B2 within guidelines of the overlay (B1 for exactly one given angle correctly drawn within guidelines of overlay)
	(b)		90	1	B1 for an angle in range 86 to 94 **or** ft 'angle' measured correctly within $\pm 2^o$

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Question		**Working**	**Answer**	**Mark**	**Notes**
17		$20 \times 36 = 720$ $4 \times 36 = 144$ **30** **6** **20** 600 120 720 **4** 120 24 144 720 144 3 6 0 1 2 6 2 8 1 2 4 2 4 6 4	864	3	M1 for a complete method with relative place value correct. Condone 1 multiplication error, addition not necessary. M1 (dep) for addition of the appropriate elements of the calculation. [Note: Repeated addition of 24 lots of 36 (36 lots of 24) gets M1 only] A1 cao
18			Ben with a valid reason	2	B2 for Ben and a valid reason, eg 'it should be 180' or 'they are not supplementary (allied, co-interior)' oe This could be implied by 184 or 84 or 92 seen [B1 for Ben and 88+96 or 180 – 88 or 180 – 96 seen or for just a valid reason given (eg without Ben or with James)]
19	(a) (b)		56 Reason 22	2 1	B1 56° cao B1 sum of angles on a straight line is 180° B1 cao

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Question		**Working**	**Answer**	**Mark**	**Notes**
20	(a)	$\frac{90}{600}$	$\frac{3}{20}$	2	M1 $\frac{90}{600}$ A1 $\frac{3}{20}$ cao [SC: B1 for 0.15 or 15% if M0 scored]
	(b)	$\frac{180}{600}\times 100$ **OR** $\frac{180}{600}=\frac{30}{100}$	30	2	M1 $\frac{180}{600}\times 100$ A1 cao **OR** M1 $\frac{180}{600}=\frac{30}{100}$ or attempt to cancel to 100 A1 cao
	(c)	$600-(90+180)$ = 330 blue or green 330÷3	110	2	M1 [“$600-(90+180)$”]÷3 A1 cao [SC: B1 for an answer of 140 or 170 if M0 scored]

<table>
<tr><th colspan="6">1380/1F</th></tr>
<tr><th colspan="2">Question</th><th>Working</th><th>Answer</th><th>Mark</th><th>Notes</th></tr>
<tr><td>21</td><td>(a)</td><td><table><tr><td>15</td><td>25</td><td>14</td><td>54</td></tr><tr><td>22</td><td>8</td><td>16</td><td>46</td></tr><tr><td>37</td><td>33</td><td>30</td><td>100</td></tr></table></td><td>Table</td><td>3</td><td>B3 for all 5 correct
(B2 for 3 or 4 correct)
(B1 for 1 or 2 correct)</td></tr>
<tr><td></td><td>(b)</td><td></td><td>$\frac{37}{100}$</td><td>1</td><td>B1 $\frac{37}{100}$ oe</td></tr>
<tr><td></td><td>(c)</td><td></td><td>$\frac{24}{46}$</td><td>2</td><td>B2 for $\frac{"'46'-'22'"}{'46'}$ oe, ft from no of girls
(B1 16 + 8 or 24 or ‘46’ seen)</td></tr>
<tr><td>22</td><td></td><td></td><td>$2c + 4r$</td><td>2</td><td>B2 for 2c +4r oe
[B1 for 2c or 4r oe seen]
Ignore any Left Hand Side = $2c + 4r$
{Note: ignore units or use of ‘p’}</td></tr>
<tr><td>23</td><td></td><td>$360 - (120 + 140 + 58)$</td><td>42</td><td>2</td><td>M1 $360-"(120 + 140 + 58)"$ or equivalent) or for (a + 58 + 120 + 140 = 360) oe seen
A1 cao
[Note: The subtraction MUST be from 360]</td></tr>
</table>

1380/1F					
Question		**Working**	**Answer**	**Mark**	**Notes**
24	(a)	$4x = 9-1$ $\frac{4x}{4}+\frac{1}{4}=\frac{9}{4}$	2	2	M1 for $4x = 9-1$ or $\frac{4x}{4}+\frac{1}{4}=\frac{9}{4}$ or a clear intention to either subtract 1 from both sides of the equation or to divide each term by 4 A1 for 2 (accept $\frac{8}{4}$)
	(b)	$2y = 12+1$ $\frac{2y}{2}-\frac{1}{2}=\frac{12}{2}$	6.5	2	M1 $2y = 12+1$ or $\frac{2y}{2}-\frac{1}{2}=\frac{12}{2}$ or a clear intention to either add 1 to both sides of the equation or divide each term by 2 A1 6.5 oe (accept $\frac{13}{2}$)
25	(a)		Vertices at (2, –2), (7, –2), (7, –6), (4, –6), (4, –4), (2, –4)	2	B2 for a fully correct rotation [B1 for correct shape with correct orientation **OR** a 90° anticlockwise rotation about *0* **OR** a 180° rotation about *O* **OR** for any 3 correct sides in the correct position]
	(b)		Translation by $\begin{pmatrix}3\\-1\end{pmatrix}$	2	B1 for translation B1 (indep) for $\begin{pmatrix}3\\-1\end{pmatrix}$ or 3 right and 1 down

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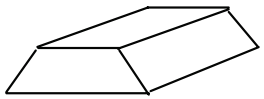
Question		**Working**	**Answer**	**Mark**	**Notes**
26	(a)		opp sides are equal	1	B1 for a correct explanation
	(b)	$4x - 2x = 12 - 1$	5.5	2	M1 for $4x + 1 - 1 - 2x = 2x + 12 - 1 - 2x$ oe A1 for 5.5 or 11/2 or 5½
	(c)	'5.5' $\times 2$ + $4\times$'5.5'+1 + $2\times$'5.5'+12	57	2	M1 for correct substitution of x = '5.5' into the four expressions to find the sum of FOUR sides or 8x + 13 seen A1 ft
27	(a)			2	M1 rectangle with either correct width or height or any square A1 cao
	(b)			2	B2 for a correct sketch (B1 any 3-D sketch of no more than 4 faces seen, with a trapezoidal face)
28	(a)			2	B1 'What type of magazine do you read?' B1 for at least 2 magazines identified in response boxes [Note: B0 for any data collection sheet/chart
	(b)		How many magazines have you read in the last week 0 ☐ 1 ☐ 2-3 ☐ >3 ☐	2	B1 Relevant question that refers to a time period. B1 for at least 3 mutually exclusive response boxes (need not be exhaustive)

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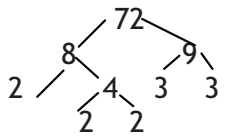
Question		**Working**	**Answer**	**Mark**	**Notes**
29	(a)		15.456	1	B1 cao
	(b)		0.15456	1	B1 cao
	(c)		3220	1	B1 cao
30	(a)	$x^2 = 72 \div 2$	6	2	M1 for 72 ÷ 2 or 36 seen A1 6 or -6 or ± 6
	(b)	$72 = 2 \times 36 = 2 \times 2 \times 18$ $= 2 \times 2 \times 2 \times 9$  	$2 \times 2 \times 2 \times 3 \times 3$	2	M1 for a systematic method of at least 2 correct divisions by a prime number oe factor tree or a full process with one calculation error; can be implied by digits 2, 2, 2, 3, 3 on answer line A1 for $2 \times 2 \times 2 \times 3 \times 3$ or $2^3 \times 3^2$ oe [Note 1 × 2 × 2 × 2 × 3 × 3 gets M1 A0]