

November 2009

1380/1F					
Question	Working	Answer	Mark	Notes	
1	(a)		13°C	1	B1 cao
	(b)		15°C	1	B1 cao
	(c)		7pm	1	B1 Accept 1900, 7
	(d)		Decreasing	1	B1 eg decreasing, downwards, falling, -4° , etc.
2	(a)	Three thousand one hundred and four.	3104 words	1	B1 for Three thousand one hundred and four.
	(b)		2500	1	B1 Accept 25 hundred
	(c)		4000	1	B1 Accept 4 thousand, thousands.
3	(a)	$27 - 18 + 15 =$	24	2	M1 $27 - 18 + 15$ A1 cao
	(b)	$24 \div 3$ or $24 - 3 - 3 - 3 - 3 \dots$	8	2	M1 $24 \div 3$ or complete method for dividing 24 by 3 A1 cao
4	(a)		24	1	B1 cao
	(b)		20	1	B1 cao
	(c)	Friday $16 = 2$ wheels Saturday $28 = 3$ wheels (24) + $\frac{1}{2}$ wheel	F: 2 wheels S: $3\frac{1}{2}$ wheels	2	B1 cao B1 cao

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Question	Working	Answer	Mark	Notes	
5	(a)	(2,4)	1	B1 cao	
	(b)	(-3,1)	1	B1 cao	
	(c)	(0,-2) marked	1	B1 cao	
6	(a)	5, 2, 1	1	B1 for 5, 2, 1 in any order	
	(b) (i)	7p	2	B1 cao	
	(ii)	19p		B1 cao	
7	(a)	23 33 45 57 63	1	B1 cao	
	(b)	-5 -3 1 4 6	1	B1 cao	
	(c)	0.3 0.315 0.32 0.379 0.39	1	B1 cao	
8	(a)	6.8-7.2	1	B1 6.8-7.2	
	(b)	Cross	1	B1 Cross within overlay (2.8-3.2 cm from A)	
9	(a)	5	1	B1 cao	
	(b)	line	1	B1	
	(c)	Reflection	1	B1 Correct reflection. Allow vertices slightly misplaced (no more than $\frac{1}{4}$ side square length)	

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10	(a)	$3 \times 4 + 5 = (3 \times 4) + 5 =$	17	1	B1 cao
	(b)	$8 - 2 \times 4 = 8 - (2 \times 4) =$	0	1	B1 cao
	(c)	$42 \div (2 \times 3) = 42 \div 6 =$	7	1	B1 cao
11	(a)		25	1	B1 cao
	(b)		2000	1	B1 Accept "2 thousand"
12	(a)	$100 - (25 + 40 + 20)$	15%		B1 15 or 15%
	(b)		Salt & Vinegar		B1 Accept S&V, 2 nd , 40%, second OR ft from table
	(c)	$\frac{25}{100} = \frac{1}{4}$	$\frac{1}{4}$	2	B2 for $\frac{1}{4}$ (B1 for any equivalent fraction to $\frac{1}{4}$, 0.25, $\frac{25}{100}$)
	(d)	$200 \times \frac{20}{100}$ oe, eg $200 \times 20 \div 100$, $200 \div 5$	40	2	M1 for $200 \times \frac{20}{100}$ oe A1 cao SC: 40% gets M1 A0

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Question		Working	Answer	Mark	Notes
13	(a)(i)		7.0–7.5	1	B1 7.0–7.5, $7\frac{1}{4}$, $7\frac{1}{2}$
	(ii)		100–120	1	B1 100–120
	(b)(i)		48–52	1	B1 48–52
	(ii)		21–25	1	B1 21–25
14			Triangle	3	B3 Fully correct: One angle and both sides, and drawn as a triangle. (B2 Two of 90°, 8 cm, 4.5 cm) (B1 One angle or one side) Tolerances: Angle of $90\pm 2^\circ$, side of 4.5 cm drawn as 4.3–4.7 cm, side of 8cm drawn as 7.8–8.2 cm.
15	(a)		$\frac{4}{7}$	1	B1 $\frac{4}{7}$ oe
	(b)		$\frac{3}{7}$	2	M1 $\frac{3}{x}$, $x > 3$ or 1–(a) oe A1 ft

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Question	Working	Answer	Mark	Notes									
16	$\frac{3}{8} + \frac{1}{4} = \frac{3}{8} + \frac{2}{8} =$ <p>Or</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td>1</td> <td>4</td> </tr> <tr> <td>3</td> <td>XXXX</td> <td>12</td> </tr> <tr> <td>8</td> <td>8</td> <td>32</td> </tr> </table> <p>$8 + 12 = 20$</p>		1	4	3	XXXX	12	8	8	32	$\frac{5}{8}$	2	<p>M1 Use of common denominator: $\frac{1}{4}$ as $\frac{2 \times 1}{2 \times 4}$ or writing both fractions with a common denominator other than 8 with at least one of the fractions correct.</p> <p>OR $0.375 + 0.25$</p> <p>A1 $\frac{5}{8}$ Accept 0.625 only</p> <p>Or</p> <p>M1 for sight of the addition table and $8 + 12 (= 20)$</p> <p>A1 $\frac{5}{8}$</p>
	1	4											
3	XXXX	12											
8	8	32											
17	(a) $15 \times 6 =$	90p	2	M1 15×6 or repeated addition of six 15s or fifteen 6s A1 cao									
	(b) $75 \div 25 =$	3p	2	M1 $75 \div 25$ or adds up three 25s or subtracts three 25s from 75 A1 cao									
18	(a)	173160	1	B1 cao									
	(b)	173.16	1	B1 cao									

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Question	Working	Answer	Mark	Notes	
19	(a)		-2,(0,2),4,6,8	2	B2 for all 4 correct values of y (B1 for 2 or 3 correct values of y)
	(b)		Line	2	B2 for correct straight line between $x = -2$ and $x = 3$ (B1 for a line which passes through $(0, 2)$, or a line with gradient 2, or at least 4 points from their table plotted correctly)
	(c) (i)		-1	1	B1 for $y=-1$, or ft $x=-1.5$ from any portion of a straight line segment.
	(ii)		2.5	1	B1 for $x=2.5$, or ft $y=7$ from any portion of a straight line segment.
20	(a)		060°	1	B1 $(0)57^\circ - (0)62^\circ$
	(b)		Cross C	2	B1 cross 4 cm (± 0.2 cm) from B B1 cross 160° ($\pm 2^\circ$) from B [SC: B1 cross 4cm and 160° from A)
21	(a)		Reasons	1	B1 eg larger sector
	(b)			1	B1 eg don't know actual numbers
22			Graph	2	B2 complete graph (see overlay) (B1 for 4 points plotted and joined or 6 points not joined.) Note: Tolerance ± 2 mm, mark graph between January and June only

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Question	Working	Answer	Mark	Notes																													
23	$\begin{array}{r} 423 \quad 12 \\ \times 12 \quad \times 423 \\ \hline 4230 \quad 4800 \\ \underline{846} \quad 240 \\ 5076 \quad \underline{36} \\ 5076 \end{array}$ <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td rowspan="2" style="vertical-align: middle;">1</td> </tr> <tr> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td rowspan="2" style="vertical-align: middle;">2</td> </tr> <tr> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">8</td> <td style="text-align: center;">4</td> <td style="text-align: center;">6</td> <td></td> </tr> </table> <table border="1" style="display: inline-table; vertical-align: middle;"> <tr> <td style="text-align: center;">400</td> <td style="text-align: center;">20</td> <td style="text-align: center;">3</td> <td rowspan="2" style="vertical-align: middle;">10</td> </tr> <tr> <td style="text-align: center;">4000</td> <td style="text-align: center;">200</td> <td style="text-align: center;">30</td> </tr> <tr> <td style="text-align: center;">800</td> <td style="text-align: center;">40</td> <td style="text-align: center;">6</td> <td style="vertical-align: middle;">2</td> </tr> </table> $4000+200+30+800+40+6=5076$	4	2	3	1	0	0	0	4	2	3	2	0	0	0	8	4	6		400	20	3	10	4000	200	30	800	40	6	2	5076	3	<p>M1 for a complete method with relative place value correct. Condone 1 multiplication error, addition not necessary.</p> <p>M1 (dep) for addition of all the appropriate elements of the calculation</p> <p>A1 cao</p> <p>M1 for a complete grid with not more than 1 multiplication error, addition not necessary.</p> <p>M1 (dep) for addition of all the appropriate elements of the calculation</p> <p>A1 cao</p> <p>M1 for sight of a complete partitioning method, condone 1 multiplication error, addition not necessary.</p> <p>M1 (dep) for addition of the all the appropriate elements of the calculation</p> <p>A1 cao</p> <p>M2 for repeated addition, exactly 12</p> <p>A1 cao</p>
4	2	3	1																														
0	0	0																															
4	2	3	2																														
0	0	0																															
8	4	6																															
400	20	3	10																														
4000	200	30																															
800	40	6	2																														

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24	(a)		Enlarged P	2	B2 any correct enlargement (B1 at least one side drawn to a sf of 3) tol $\frac{1}{2}$ sq (B1 correct enlargement by SF \neq 3)
	(b)	Triangle at $(-4,2),(-2,2),(-2,3)$	Reflected P		M1 reflection in any line parallel to y axis, or correct reflection in x axis. A1 cao
	(c)	Triangle at $(2,-1),(3,-1),(2,-3)$	Rotated Q	3	B3 fully correct (B2 correct orientation in correct quadrant or 90° anticlockwise about O) (B1 any rotation about O OR correct orientation in incorrect quadrant). SC B1 If Q is plotted correctly in all 4 quadrants then award

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Question		Working	Answer	Mark	Notes
25	(a)		Reasons	2	1 st aspect: time frame 2 nd aspect: overlapping boxes (eg. 'the 5 is in two places' 'the amounts overlap') 3 rd aspect: not exhaustive (eg no <£1, other) Award B2 for 2 aspects, B1 for 1 aspect
	(b)		Any 2 of 1 st , 2 nd and 3 rd aspects	2	1 st aspect: one question or responses which includes a time frame 2 nd aspect: at least 3 non-overlapping response boxes; need not be inclusive of all. 3 rd aspect ; Allow for inclusion of (£)0 or use of phrase 'bigger than' oe with at least 3 response boxes Award B2 for two aspects, B1 for one aspect NB response boxes must be intervals but allow 0 on its own for the 3 rd aspect
26		$(5 \times 5) \times 6$	150 cm ²	4	M1 for attempt to find the area of one face (eg 5×5 or 25) M1 for 6 faces with an intention to add A1 cao B1 (indep) for cm ² (with or without numerical answer) NB Do not accept any calculation which should lead to 125

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27		$N=4p+20b$	3	<p>B3 for $N=4p+20b$ oe</p> <p>(B2 $4p+20b$ as an expression not in a formula Or $N=k+20b$ oe or $N=4p+k$ oe $k \neq 0$)</p> <p>(B1 for $N=cp + db$, c and d numerical and not both zero Or $k+20b$ oe or $4p+k$ oe any $k \neq 0$)</p> <p>SC B2 for $N=4p+20b$ subsequently incorrectly simplified SC B2 for $kN=4p+20b$ ($k \neq 1$) SC B1 for $4p+20b$ subsequently incorrectly simplified SC B1 for $N=4p$ (space)$20b$ or $N=4p \times 20b$</p>
28	$\frac{30 \times 5}{0.2} = 150 \div 0.2 = 750$	750–775	3	<p>M1 For correct roundings to 1 sig fig of two or three of the figures or consistent multiples</p> <p>e.g 150, or 155 or two of 30, 5, 0.2 or $\frac{31 \times 500}{20}$ or</p> <p>$\frac{30 \times 500}{20}$ or $\frac{30 \times 500}{21}$</p> <p>Or</p> <p>A1 for any correct approximate expression which would give the answer after one operation e.g $\frac{150}{0.2}$ or $\frac{155}{0.2}$ or</p> <p>150×5 or 30×25 or 31×25 or 155×5 or $\frac{1500}{2}$</p> <p>A1 750–775</p> <p>Do not accept attempts at full working out</p>

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Question		Working	Answer	Mark	Notes
29	(a)		$2y^2 - 3y$	1	B1 $2y^2 - 3y$ or $2 \times y^2 - 3 \times y$
	(b)		$x(x-4)$	2	B2 $x(x-4)$ or $(x+0)(x-4)$ condone omission of final bracket (B1 $x(\text{linear in } x)$ condone omission of final bracket) (B1 for $x-4$)
	(c)		$-1,0,1,2$	2	B2 cao (-1 each error or omission)