1MA0_1F					
Question		Working	Answer	Mark	Notes
1	(a)		E	1	B1 cao
	(b)		Cylinder	1	B1 for cylinder or circular prism. Use professional judgement re spelling of cylinder
	(c)		6	1	B1 cao
	(d)		8	1	B1 cao
2	(a)		507	1	B1 cao
	(b)		40	1	B1 for 40 or forty or 4 tens (do not accept an answer of "tens")
	(c)		6000	1	B1 for 6000 or six (6) thousand
3	(a)		43	1	B1 cao
	(b)	3 + 10	13	1	B1 cao
	(c)		7.1 – 7.9 inc.	1	B1 for answer in the range 7.1 – 7.9 inc
4	(a)		36 – 40 inc.	1	B1 for any answer in the range 36 – 40 inc.
	(b)		line	1	B1 for line of length 4.8 – 5.2cm inc.
5	(a)			2	B1 for 6 tins drawn for Thursday B1 for 3 + ½ tins drawn for Friday. Use professional judgement re sketch of semicircle
	(b)		15	2	M1 for (4.5 – 3)×10 or 1.5×10 or 4.5×10 – 3×10 or 45 – 30 or 10 + 5 A1 for 15

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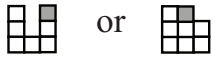
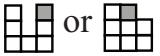
Question		**Working**	**Answer**	**Mark**	**Notes**
6	(a)		Tuesday	1	B1 for Tuesday (accept 8)
	(b)		– 6	1	B1 cao
	(c)		Wednesday or 8	2	B2 for Wednesday or 8 OR M1 for an attempt to find the difference in at least 3 of: 5 and 4, 8 and 6, 6 and -2, -1 and -4, -3 and -6; ie the answers need not be correct. A1 for Wednesday or 8
7	(a)		$\frac{3}{5}$	2	B2 cao (B1 for $\frac{9}{15}$ oe) [SC: B1 for an answer of $\frac{2}{5}$]
	(b)		0.9	1	B1 for 0.9 or 0.90 or .9
	(c)		No + reason	1	B1 for no and 0.75 or 80% or $\frac{75}{100}$ and $\frac{80}{100}$
8	(a)			1	B1 for 
	(b)			1	B1 cao

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Question		**Working**	**Answer**	**Mark**	**Notes**
9	(a)		No + reason	1	B1 for no and the (prob.) of red is (bigger than the (prob.) of blue. OR (prob.) of blue is nearer 0 OR (prob.) of red is closer to 1 OR (prob.) of red is 50% and the (prob.) of blue is about 20% oe
	(b)(i)		$\frac{4}{7}$	2	B1 for $\frac{4}{7}$ oe
	(ii)		0		B1 for 0 or $\frac{0}{7}$ or 0% (accept 0 out of 7, but not 0:7 or 0 to 7)
10		F + C + S 30 + 7 + 8 = 45 3×20 – 45 = 15	15	4	M2 for 30 + 7 + 8 (= 45) (M1 for 12 × 2 + 7 × 3 + 8 (= 53) or 12 × 2 + 7 × 2 (= 38)) M1 (dep on at least M1) for "20 × 3" – "45" or "20 × 3" – "53" A1 cao [SC: B1 for an answer of 22 if M0 scored]
11	(a)		(1, 2)	1	B1 cao (accept coordinates just shown on the grid)
	(b)		(0, –3)	1	B1 cao (accept coordinates just shown on the grid)
	(c)		(3, –2)	1	B1 for (3, –2) or (–3, –4) or (–1, 6) [SC: B1 for coordinates reversed, (–2, 3) or (–4, –3) or (6, –1) if coordinates reversed in parts (a) **and** (b)]

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Question		**Working**	**Answer**	**Mark**	**Notes**
12	(a)(i)		19	2	B1 cao
	(ii)		Add 4		B1 for add 4 (+4) oe or $4n - 1$ (or $\times 4 - 1$)
	(b)	15 – 10 = 5 5×4 = 20	20	2	M1 for (15–10)×4 or 4 + 4 + 4 + 4 + 4 or 59, 39 or (4×15 – 1) – (4×10 – 1) or '59' – '39' from a list A1 cao
13	(a)		$3f$	1	B1 for $3f$ or $f3$ or $3 \times f$ or $f \times 3$
	(b)		$6m$	1	B1 for $6m$ or $m6$
	(c)		$4a + 5h$	2	B2 for $4a + 5h$ or $5h + 4a$ (B1 for $4a$ or $5h$ or $4a + 5h = 9ah$)
14	(a)		08 50	1	B1 for 08 50 or 8 50 (am) or 10 to 9
	(b)	13 43 – 13 29	14	1	B1 cao
	(c)*	e.g. HL to SC: 11 02 – 11 41 Visit (at least 3 hours) SC to HL: 15 16 – 15 49 [Note : there are 9 possible solutions]	A fully correct plan showing departure times and arrival times of the two bus journeys	4	B1 for a departure time of 08 02 or 09 04 or 10 12 or 11 02 from HL M1 (indep) for a correct arrival time at SC and a correct departure time from SC (or Cartbridge St) which allows for a stay of at least 3 hours in SC (the differencing does not have to be seen) OR for correctly adding 3 hours to a their arrival time at SC B1 for a departure time from SC of 13 20 (13 11 from CS) or 14 24 (14 14 from CS) or 15 16 (15 07 from CS) C1 (dep on M1) for a complete correct plan which includes the departure and arrival times of the two bus journeys [Note: bus departure times may be identified by their starting times. Eg the 15 07 from Cartbridge Street would be acceptable for the identification of the bus which arrives a HL at 15 49]

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Question		**Working**	**Answer**	**Mark**	**Notes**
15	(a)		32	1	B1 cao
	(b)	e.g. $20 = £12.50 $100 = 5×£12.50 = £62.50 £62.50 – 60 = £2.50	£2.50 OR $4	3	M1 for a correct method to convert $100 to £, e.g. 5× '12.50' (= 62.50) ('12.50' is their reading from the graph at $20) M1 (dep) for '62.50' – 60 A1 for £2.5(0) (units must be stated) **OR** M1 for correct method to convert £60 to $, e.g. 3×32 (=96) or ft their answer to part (a) M1 (dep) for 100 – '96' A1 for $4 (units must be stated)
16	(a)	3×3×3×3	81	1	B1 cao
	(b)		4	1	B1 cao
17	(a)		7	1	B1 cao
	(b)		12	1	B1 cao
	(c)	$5w = 10 + 6$ $w = 16÷5$ or $w - \frac{6}{5} = \frac{10}{5}$ oe	16/5 oe	2	M1 for $5w-6+6 = 10 + 6$ oe or $w - \frac{6}{5} = \frac{10}{5}$ oe A1 for $\frac{16}{5}, 3\frac{1}{5}, 3.2$, oe

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Question		**Working**	**Answer**	**Mark**	**Notes**
18	(a)		21	1	B1 cao
	(b)		17	1	B1 cao
	(c)	55 – 15	40	2	M1 for 55 – 15 (accept 15 – 55 or 15 to 55 or 55 to 15 or 15, 55 but not 15 + 55) A1 cao
19*		360 – 200 – 90 (=70) (180 – '70') ÷2 angles at a point add to 360°, angles in a triangle add to 180°, base angles of an isosceles triangle are equal	$y = 55$ reasons	4	M1 for 360 – 200 – 90 oe M1 for (180 – '70') ÷ 2 Reasons: angles at a point add up to 360° angles in a triangle add up to 180° base angles of an isosceles triangle are equal C2 for $y = 55°$ and all correct reasons Note: An answer of 55° alone, is not enough; $y = 55°$ must be explicitly stated or clearly shown on the diagram (C1 for one correct reason) Note: the award of any C mark is dependant upon the award of at least M1

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Question		**Working**	**Answer**	**Mark**	**Notes**
20		$\frac{1}{2} \times 60 = 30$, $30 \times 5 = 150$ $\frac{1}{3} \times 60 = 20$, $20 \times 4 = £80$ $3 \times 60 = 180$ $180 + 75 – 150 – 80 = £25$ 10 bags (i.e. 60 – 30 – 20) sold for 25 $25 \div 10 = 2.50$ OR $\frac{1}{2} \times 60 = 30$, $30 \times £2 = £60$ profit $\frac{1}{3} \times 60 = 20$, $20 \times £1 = £20$ profit $60 + 20 = £80$ $80 – 75 = 5$ loss on 10 bags (i.e. 60 – 30 – 20) $10 \times £3 = £30$ $30 – 5 = £25$ $£25 \div 10 = £2.50$	2.50	4	M1 for $\frac{1}{2} \times 60 \times 5$ (=150) or $\frac{1}{3} \times 60 \times 4$ (=80) M1 (dep on 1st M1) for $3 \times 60 + 75$ – '150' – '80' oe (=25) M1 (dep on previous M1) for '25'÷(60 – '30' – '20') A1 for 2.50 (accept 2.5) OR M1 for $\frac{1}{2} \times 60 \times 2$ (=60) or $\frac{1}{3} \times 60 \times 1$ (=20) M1 (dep on 1st M1) for (60 – '30' – '20') × 3 – ('60' + '20' – 75) oe (=25) M1 (dep on previous M1) for '25'÷(60 – '30' – '20') A1 for 2.50 (accept 2.5)

<table>
<tr><th colspan="6">1MA0_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></td><td>e.g.
41 – 21 (=20)
49 – 10 – 20 (=19)
16 + 19 = 35

OR
(100 – 49) – (16 + 21) (=14)
14 + 10 (=24)
100 – (41 + 24) = 35

<table>
<tr><td></td><td>w</td><td>b</td><td>c</td><td></td></tr>
<tr><td>Boys</td><td>16</td><td>21</td><td>14</td><td>51</td></tr>
<tr><td>Girls</td><td>19</td><td>20</td><td>10</td><td>49</td></tr>
<tr><td></td><td>35</td><td>41</td><td>24</td><td>100</td></tr>
</table>
</td><td>35</td><td>4</td><td>M1 for 41 – 21 (= 20) or
M1 for 49 – 10 – ‘20’ (= 19)
M1 for 16 + ‘19’
A1 cao

OR
M1 for 100 – 49 (=51)
M1 for ‘51’ – 21 – 16 (= 14) and ‘14’ +10 (= 24)
M1 for 100 – (41 + ‘24’)
A1 cao

NB working may appear in table or diagram</td></tr>
<tr><td>22</td><td></td><td></td><td>4×6 rectangle</td><td>2</td><td>B2 for a single 4×6 rectangle drawn anywhere on the grid
(B1 for a single 4×n rectangle or a single m×6 rectangle drawn anywhere on the grid)

Note: All nets and 3-D sketches get NO marks</td></tr>
</table>

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Question		**Working**	**Answer**	**Mark**	**Notes**
23		180×1.5 40×1.5 110×1.5 30×1.5	Flour = 270 Ginger = 60 Butter = 165 Sugar = 45	3	M1 for ×24÷16 oe or 24/16 or 1.5 seen or 180 + 90 (=270) or 40 + 20 (=60) or 110 + 55 (=165) or 30 + 15 (=45) or sight of any one of the correct answers A2 for all 4 correct answers (A1 for 2 or 3 correct answers)
24	(a)		Positive (correlation)	1	B1 for positive (correlation) [do not accept a relationship]
	(b)		83 to 87 inc.	2	B2 for an answer in the range 83 to 87 inc. OR M1 for a single straight line segment with positive gradient that could be used as a line of best fit or for an indication on the diagram from 148 on the height axis A1 ft from their line of best fit
25		$\frac{9}{2}\times(12+18)=135$ 135 ÷ 20 = 6.75 (=7 bags) 7 × 4.99 OR $18\times9-\frac{1}{2}(6\times9)$ = 135 135 ÷ 20 = 6.75 (=7 bags) 7 × 4.99	34.93	4	M1 for $\frac{9}{2}\times(12+18)$ or $18\times9-\frac{1}{2}(6\times9)$ or $9\times12+\frac{1}{2}\times(18-12)\times9$ or 135 seen M1 (dep) for '135'÷ 20 or 6 or 7 seen M1 (dep on previous M1) for '6' × 4.99 or '7' × 4.99 A1 cao [SC: M1 for (12×9 + 6×9) ÷ 20 (= 162÷20) or 8 or 9 seen M1 (dep) for '8' × 4.99 or '9' × 4.99 OR M1 for (18×9 − 6×9) ÷ 20 (= 108÷20) or 5 or 6 seen M1 (dep) for '5' × 4.99 or '6' × 4.99]

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Question		**Working**	**Answer**	**Mark**	**Notes**
26			Eg. How many hours do you read each day? 0 to 1 h ☐ over 1 h to 2 h ☐ over 2 h ☐	2	B1 for an appropriate question with reference to a time frame, with a unit of time, or a question with a time frame, with a unit of time, implied by responses B1 for at least 3 non-overlapping boxes (ignore if not exhaustive) or for at least 3 exhaustive boxes (ignore if any overlapping) [Note: labels on response boxes must not be inequalities] Do not accept frequency tables or data collection sheets for award of the second B mark
27		Area of cross section $4\times7 + 5\times2$ or $9\times2 + 5\times4$ **OR** $9 \times 7 - 5 \times 5$ (= 38)	380	3	M1 for $4\times7 + 5\times2$ (=38) or $9\times2 + 5\times4$ (=38) or $7\times9 - 5\times5$ (=38) or $4\times7\times10$ or $5\times2\times10$ (=100) or $9\times2\times10$ (=180) or $5\times4\times10$ (=200) or $9\times7\times10$ (=630) or $5\times5\times10$ (=250) M1 (dep) for '38'×10 or 380 or $4\times7\times10 + 5\times2\times10$ or $9\times2\times10 + 5\times4\times10$ or $(7\times9 - 5\times5)\times10$ A1 cao
28			Region shaded	3	B1 for circle arc of radius 3cm (± 2mm) centre Burford B1 for circle arc of radius 5 cm (± 2mm) centre Hightown B1 for overlapping regions of circle arcs shaded

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Question		**Working**	**Answer**	**Mark**	**Notes**
29*		180÷9×1:180÷9×3:180÷9×5 =20:60:100 Not enough cement (but enough sand and enough gravel) OR 1×15:3×15:5×15 =15:45:75 15+45+75=135 (<180) Not enough cement (to make 180kg of concrete)	No + reason	4	M1 for 180 ÷ (1+3+5) (=20) or 3 multiples of 1: 3: 5 M1 for 1×'20' or 3×'20' or 5×'20' or 20 seen or 60 seen or 100 seen A1 for (Cement=) 20, (Sand=) 60, (Gravel=) 100 C1 ft (provided both Ms awarded) for not enough cement oe **OR** M1 for (1×15 and) 3×15 and 5×15 or 9×15 or sight of the numbers 15, 45, 75 together. M1 for '15' + '45' + '75' A1 for 135 (<180) C1 ft (provided both Ms awarded) for not enough cement oe