

Specification A: Paper 1 Foundation Tier

1MA0/1F				
Question	Working	Answer	Mark	Additional Guidance
1.		65	1	B1 cao
(a)				
(b)	5 – 3.8	1.2	2	M1 5 – 3.8 A1 cao
Total for Question: 3 marks				
2.	$44 - 8 = 36$ $36 + 19 = 55$ $47 + 3 = 53$ OR $44 + 19 - 8 = 55$ $47 + 6 = 53$ OR $47 - 44 = 3$ $3 + 8 = 11$ $19 - 11 - 6 = 2$	2 (with appropriate reason)	2	M1 Clear attempt to find the number of spaces available on the bus after the bus stops A1 reason for answer which must comment on the difference between 55 and 53
Total for Question: 2 marks				

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Question	Working	Answer	Mark	Additional Guidance
3.				
(a)		(6, 7)	1	B1 cao
(b)		(3, 5.5)	2	M1 Clear attempt to find the mean of either x or y coordinates of P and Q A1 cao OR M1 identifies the midpoint of PQ on the diagram A1 cao SC B1 for exactly one coordinate correct
(c)		(6, 0)	2	M1 for B correctly placed on the x axis A1 for (6, 0)
Total for Question: 5 marks				
4.				
FE				
(a)		cylinder	1	B1 cao
(b)		9	1	B1 cao
(c)		D, E	1	B1 cao
(d)(i)		Net	5	B3 fully correct (B2 5 correct faces) (B1 a net of a cuboid)
(ii)		14 cm \times 18 cm		B1, B1 ft on d(i)
Total for Question: 8 marks				
5.				
(a)		16 cm	1	B1 cao (units included)
(b)		48 cm ³	4	M1 3-D drawing or sketch M1 $4 \times 4 \times 2$ and $2 \times 2 \times 4 / 4 \times 4 \times 4$ and $2 \times 2 \times 4$ M1 adding or subtracting A1 cao (units included)
Total for Question: 5 marks				

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Question	Working	Answer	Mark
6. FE		Correct table WITH EITHER Bar chart OR Pictogram OR Pie Chart	6
			Additional Guidance
			B1 Table with at least 2 columns with car, lorry, van, motorbike and bus rows M1 tally column completed or headed frequency column with at least two entries correct A1 correct frequencies (7, 4, 5, 6, 2) WITH EITHER B1 labelled axes with a uniform scale M1 bars labelled all the same width A1 bars all correct (ft from a) OR B1 labelled pictogram M1 5 classes + key A1 all correct (ft from a) OR B1 circle with 5 sectors labelled M1 correct calculation of at least one angle A1 all sectors correct (ft from a)
(b)	25% of 24 = 6	Yes as 5 < 6	2
(c)		Survey at different places Survey at different times Do a bigger survey	2
			Total for Question: 10 marks

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Question	Working	Answer	Mark	Additional Guidance
7.		Correct diagram	1	B1 4 identical shapes to the previous patterns
(a)				
(b)		60	2	M1 continues pattern 6, 12, 18, as far as the 10th A1 cao OR M1 indicates that the number of sticks is 6 times the pattern number A1 cao OR M1 doubles 30 sticks for pattern number 5 A1 cao
(c)	123 ÷ 6 leaves a remainder of 3, so 'no'	No + justification	2	M1 Attempts to divide 120 by 6 A1 'No' + comment on remainder OR M1 Starts at 6 and builds up to 120 and 126 A1 'No' + sight of 120 and 126
Total for Question: 5 marks				
8.		C and D	1	B1 cao
(a)				
(b)		B and E	1	B1 cao
(c)		4.5 cm ²	1	B1 cao
Total for Question: 3 marks				

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Question	Working	Answer	Mark	Additional Guidance
9.				
(a)		Correct reflection	1	B1 cao
(b)		Correct square	1	B1 cao
(c)	See pattern at end	Correct squares	1	B1 cao
Total for Question: 3 marks				
10.				
(a)		$6x$	1	B1 cao
(b)		$y \geq -2$	2	M1 attempt to isolate y A1 cao
Total for Question: 3 marks				
11.				
QWC i, ii, iii	50 shirts at £12 each = £600 Selling Price for profit of 30% = $£12 \times 1.3 = £15.60$ 20 shirts at £15.60 = £312 Reduced selling price = $£15.60 \times 0.85 = £13.26$ 30 shirts at £13.26 = £397.80 $£397.80 + £600$	Yes, together with appropriately set out working which supports answer	8	B1 for price of 50 shirts M1 for $£12 \times 1.3$ A1 for £15.60 A1 for 20 shirts = £312 M1 for $£15.60 \times 0.85$ A1 for £13.26 A1 for 30 shirts = £397.80 C1 Yes stated together with a statement which supports the correct answer QWC: With clear working attributed correctly
Total for Question: 8 marks				

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Question	Working	Answer	Mark
12.			
(a)		(2, 6)(4, 4) (6, 2)	2
(b)		$\frac{6}{16}$	4
Total for Question: 6 marks			
13.			
FE			
(a)		2 correct combinations	2
(b)	Best is Cost $3.49 + 1.70 = 5.19$ Change = $10.00 - 5.19$	£4.81	3
Total for Question: 5 marks			
14.			
FE			
(a)	$48 + 37 + 78 + 21 = 184$ $184 \times 40 = 7360$ $4 \times 12 = 48$ $73.60 + 48$	£121.60	4
(b)	$2000 \div 50 = 40$ $4000 \div 40 = 100$ OR $2000 \div 0.4 = 50000$ $50000 - 50 = 100$ OR $0.4 \times 50 = 20$ $2000 \div 20 = 100$	100	3
Total for Question: 7 marks			

M1 lists as ordered pairs or in a table with at least 2 entries
A1 all 3 correct entriesM1 lists the sample space (at least 4 pairs)
A1 fully correct
M1 identifies cases where Ali wins
A1 caoB1 Single burger and regular cola oe
B1 Regular fries and regular cola oe
-1 for each extra incorrectM1 2 correct individual costs found
M1 sum and subtract from £10
A1 cao
SC B2 5.24
(B1 $2 \times 1.70 + 0.99 + 0.85 = (5.24)$)M1 find the total miles
M1 total miles $\times 40$ or $\times 0.4(0)$
M1 mileage expenses $+ 4 \times 12$ or $+ 5 \times 12$
A1 caoM1 for sight of 2000, or 50, or 20000
M1 dep for an attempt to find cost per week or mileage per year
A1 100
OR
M1 sight of 2000, or 50
M1 dep 0.4×50 and $2000 \div '20'$
A1 100

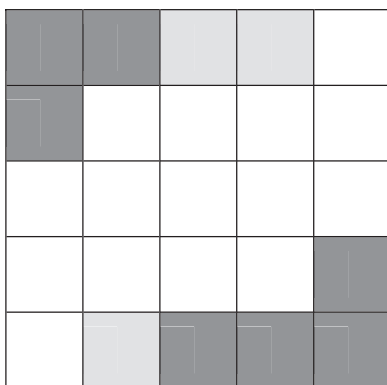
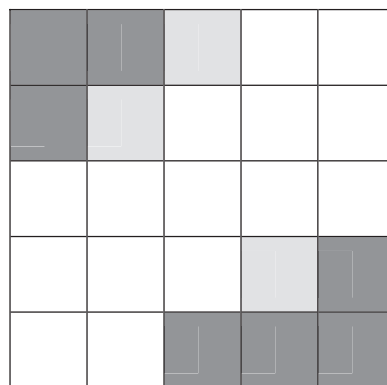
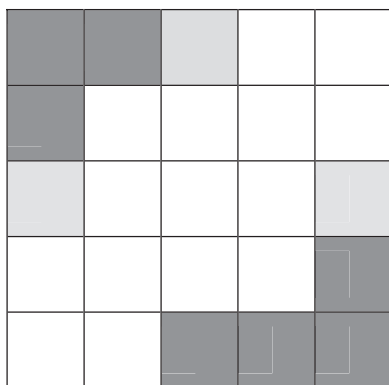
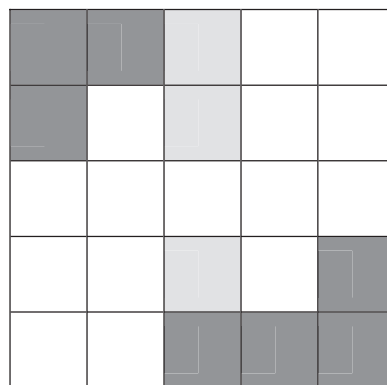
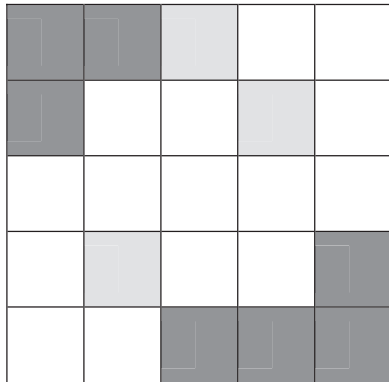
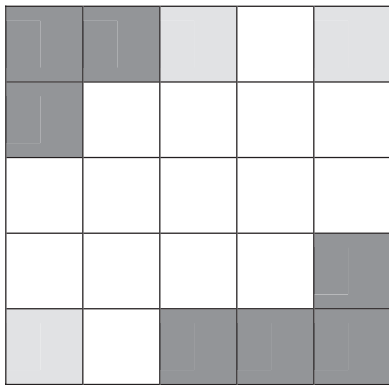
1MA0/1F	Question	Working	Answer	Mark	Additional Guidance
	15. QWC ii, iii	$\frac{1}{2} = \frac{4}{8}, \frac{1}{4} = \frac{2}{8}$ <p>So $\frac{3}{8}$ is half way</p> <p>OR</p> <p>use of 0.5 and 0.25 to get 0.375 and compare to 0.33</p> <p>OR</p> $\frac{1}{2} - \frac{1}{3} = \frac{1}{6} \quad \text{and} \quad \frac{1}{3} - \frac{1}{4} = \frac{1}{12}$ <p>followed by conclusion</p> <p>OR</p> <p>use of 0.5 and 0.25 and differences of 0.5 – 0.33(3,...) and 0.33(3,...) – 0.25</p>	Coherent and well structured argument with appropriate reason	3	<p>M1 to change both fractions to equivalent fractions M1 (dep on at least one correct equivalent fraction) to find midpoint C1 conclusion following correct work by stating that $\frac{3}{8}$ is not equal to $\frac{1}{2}$</p> <p>OR</p> <p>QWC: Decision should be stated with supporting reason given</p> <p>M1 use of 0.5 and 0.25 M1 (dep on at least correct decimal one find midpoint) C1 conclusion following correct work and sight of 0.37(5) and 0.33(3..)</p> <p>QWC: Decision should be stated with supporting reason given</p> <p>OR</p> <p>M1 for working out differences M1 For a correct method of calculating differences of fractions using equivalent fractions C1 conclusion following from $\frac{1}{6}$ and $\frac{1}{12}$</p> <p>QWC: Decision should be stated with supporting reason given</p> <p>OR</p> <p>M1 for working out differences M1 for a correct method of calculating differences of fractions using equivalent fractions C1 conclusion following from $\frac{1}{6}$ and $\frac{1}{12}$</p> <p>QWC: Decision should be stated with supporting reason given</p> <p>OR</p> <p>M1 use of 0.5 and 0.25 M1(dep on at least one correct decimal) for working out differences C1 for conclusion based on 0.17(or better) and 0.08(23...) QWC: Decision should be stated with supporting reason given</p>
					Total for Question: 3 marks

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Question	Working	Answer	Mark	Additional Guidance	
16. (a)	$5p = 20$	4	2	M1 add 16 to both sides A1 cao	
(b)	$-4 - 5 = 5q - 2q$	-3	2	M1 for correct method isolate $\pm 3q$ A1 cao	
(c)	$6x - 3 - 10 - 6x =$	-13	2	M1 at least one expansion correct A1 cao	
Total for Question: 6 marks					

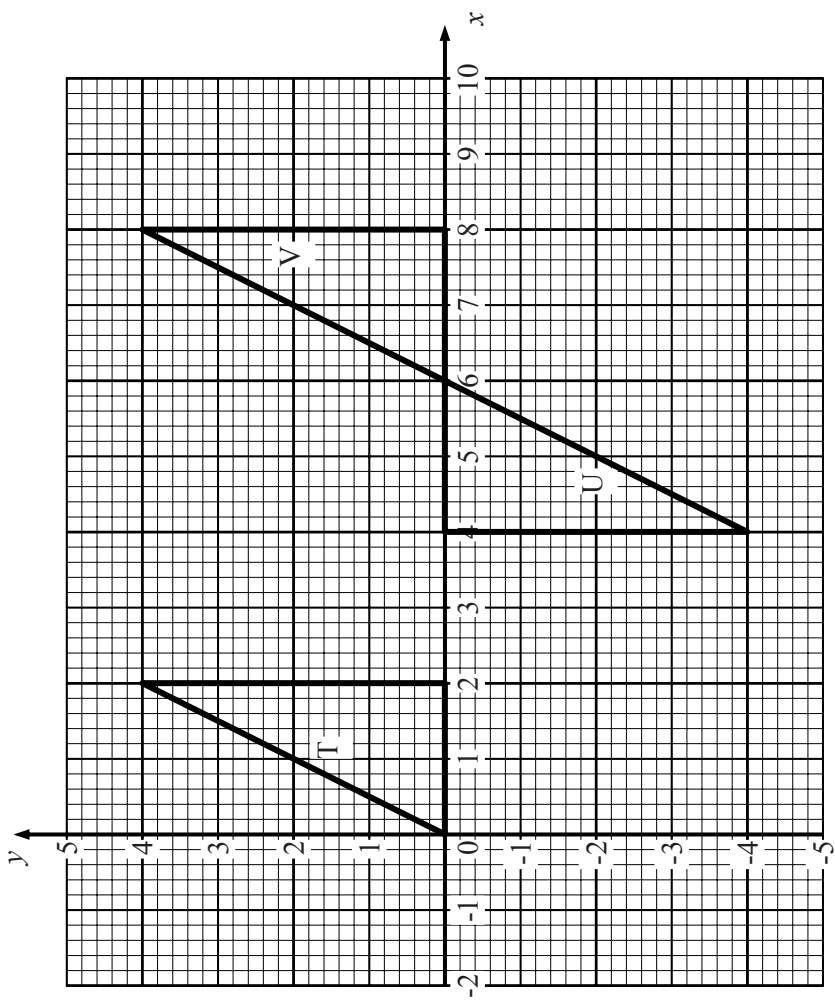
1MA0/1F				Additional Guidance
Question	Working	Answer	Mark	
17.	$x + 4x + \frac{1}{2} = 1$ $5x = \frac{1}{2}, \quad x = \frac{1}{10}$ <p>OR</p> <p>Choose a suitable number of balls (say 10) 5 will be red The other 5 need to be shared out in the ratio 1:4, hence 1 yellow and 4 blue</p>	$\frac{4}{10}$	3	<p>M1 $x + 4x + \frac{1}{2} = 1$</p> <p>A1 $x = \frac{1}{10}$</p> <p>A1 $\frac{4}{10}$ oe</p>
Total for Question: 3 marks				
18.	<p>Rotates shape about (3,0) by 180° to give U</p> <p>Rotates U about (6, 0) to give V</p> <p>(see graph at end)</p>	<p>Translation by</p> $\begin{pmatrix} 6 \\ 0 \end{pmatrix}$	3	<p>B3 Translation by $\begin{pmatrix} 6 \\ 0 \end{pmatrix}$</p> <p>(B2 translation by 6 to the right or just (B1 translation or move to the right 6) If no marks earned from a description then B1 U correctly placed B1 V correctly placed</p>
Total for Question: 3 marks				

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Question	Working	Answer	Mark
19.	<p>Number of prizes should buy</p> $\frac{3}{8} \times 1000 = 375$ <p>OR</p> <p>Each triangle should win $1000 \div 8$ times (=125) So $3 \times 125 = 375$</p>	(376) and justification that matches answer	3
<p>M1 estimate of probability A1 for answer $> \frac{3}{8}$ of 1000 C1 for justification that matches answer Number of prizes between 376 and 500</p> <p>OR</p> <p>M1 $1000 \div 8$ A1 for answer $> \frac{3}{8}$ of 1000 C1 for justification that matches answer Number of prizes between 376 and 500</p>			
Total for Question: 3 marks			
20.		$5(x - 2y)$	1
		$3p(q - 4p)$	2
<p>B1 cao B2 $3p(q - 4p)$ (B1 correct partial factorisation, for example, $p(3q - 12p)$, $12p(\frac{1}{4}q - p)$, $p(aq + bp)$ where a and b are numbers</p>			
Total for Question: 3 marks			

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Question	Working	Answer	Mark
21 FE	<p>Area of the room $= 4 \times 8 + 4 \times 6 = 56$ Area of a tile $= 0.5 \times 0.5 = 0.25$ Number of tiles $= 56 \div 0.25 = 224$ Cost = 4×224</p> <p>OR</p> <p>No of tiles around room $= 2 \times \text{lengths of room} = 8, 16,$ $16, 12$ Total number of tiles = 8×16 $+ 8 \times 12 = 224$ Cost = 4×224</p>	£ 896	6
			<p>M1 for full method for finding the area of the room A1 at least one area correct B1 for area of tile = 0.25m^2 or 2500 cm^2 or 4 tiles = 1m^2 M1 for area of room \div area of a tile M1 for $4 \times$ number of tiles A1 cao</p> <p>OR</p> <p>M1 for doubling each length to show number of tiles for each side B1 for 8, 16, 16 and 12 M1 for a full method of finding the number of tiles ($12 \times 16 + 8 \times 4$) A1 for at least one 'section' correct M1 for $4 \times$ '224' A1 cao</p>
			Total for Question: 6 marks



9 (c)



18.