1MA0/1F					
Question		**Working**	**Answer**	**Mark**	**Additional Guidance**
1.	(a)		65	1	B1 cao
	(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

1MA0/1F					
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 × 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 × 4 × 2 and 2 × 2 × 4 / 4 × 4 × 4 and 2 × 2 × 4 M1 adding or subtracting A1 cao (units included)
					Total for Question: 5 marks

1MA0/1F					
Question		**Working**	**Answer**	**Mark**	**Additional Guidance**
6. **FE**	(a)		Correct table **WITH EITHER** Bar chart **OR** Pictogram **OR** Pie Chart	6	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	M1 finding 25% of 24 A1 Yes as 5 < 6, (ft from a)
	(c)		Survey at different places Survey at different times Do a bigger survey	2	B2 2 or more reasons (B1 1 reason) Ignore irrelevant reasons
					Total for Question: 10 marks

1MA0/1F					
Question		**Working**	**Answer**	**Mark**	**Additional Guidance**
7.	(a)		Correct diagram	1	B1 4 identical shapes to the previous patterns
	(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.	(a)		C and D	1	B1 cao
	(b)		B and E	1	B1 cao
	(c)		4.5 cm^2	1	B1 cao
					Total for Question: 3 marks

1MA0/1F					
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 × 1.3 = £15.60 20 shirts at £15.60 = £312 Reduced selling price = £15.60 × 0.85 = £13.26 30 shirts at £13.26 = £397.80 £397.80 + £312 > £600	Yes, together with appropriately set out working which supports answer	8	B1 for price of 50 shirts M1 for £12 × 1.3 A1 for £15.60 A1 for 20 shirts = £312 M1 for £15.60 × 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

1MA0/1F					
Question		**Working**	**Answer**	**Mark**	**Additional Guidance**
12.	(a)		(2, 6)(4, 4) (6, 2)	2	M1 lists as ordered pairs or in a table with at least 2 entries A1 all 3 correct entries
	(b)		$\frac{6}{16}$	4	M1 lists the sample space (at least 4 pairs) A1 fully correct M1 identifies cases where Ali wins A1 cao
					Total for Question: 6 marks
13. **FE**	(a)		2 correct combinations	2	B1 Single burger and regular cola oe B1 Regular fries and regular cola oe –1 for each extra incorrect
	(b)	Best is Cost 3.49 + 1.70 = 5.19 Change = 10.00 – 5.19	£4.81	3	M1 2 correct individual costs found M1 sum and subtract from £10 A1 cao SC B2 5.24 (B1 2 × 1.70 + 0.99 + 0.85 = (5.24))
					Total for Question: 5 marks
14. **FE**	(a)	48 + 37 + 78 + 21 = 184 184 × 40 = 7360 4 × 12 = 48 73.60 + 48	£121.60	4	M1 find the total miles M1 total miles × 40 or × 0.4(0) M1 mileage expenses + 4 × 12 or + 5 × 12 A1 cao
	(b)	2000 ÷ 50 = 40 4000 ÷ 40 = 100 **OR** 2000 ÷ 0.4 = 50000 50000 – 50 = 100 **OR** 0.4 × 50 = 20 2000 ÷ 20 = 100	100	3	M1 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 ÷ '20' A1 100
					Total for Question: 7 marks

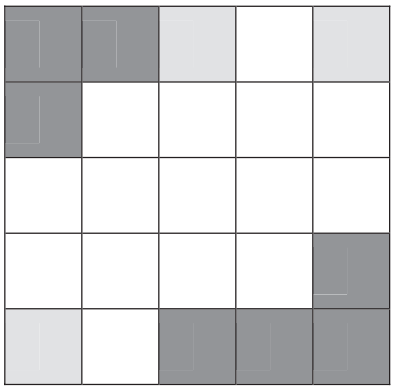
1MA0/1F					
Question		**Working**	**Answer**	**Mark**	**Additional Guidance**
15. **QWC ii, iii**		$\frac{1}{2} = \frac{4}{8}; \frac{1}{4} = \frac{2}{8}$ So $\frac{3}{8}$ is half way **OR** use of 0.5 and 0.25 to get 0.375 and compare to 0.33 **OR** $\frac{1}{2} - \frac{1}{3} = \frac{1}{6}$ **and** $\frac{1}{3} - \frac{1}{4} = \frac{1}{12}$ followed by conclusion **OR** use of 0.5 and 0.25 and differences of 0.5 – 0.33(3,…) and 0.33(3…) – 0.25	Coherent and well structured argument with appropriate reason	3	M1 to change both fractions to equivalent fractions M 1(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 $\frac{1}{3}$ **QWC: Decision should be stated with supporting reason given** **OR** 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..) **QWC: Decision should be stated with supporting reason given** **OR** 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** $\frac{1}{12}$ **QWC: Decision should be stated with supporting reason given** **OR** 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** $\frac{1}{12}$ **QWC: Decision should be stated with supporting reason given** **OR** 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**
					Total for Question: 3 marks

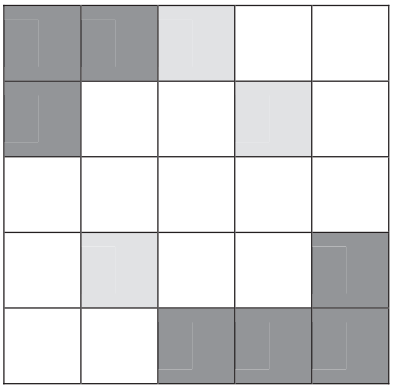
1MA0/1F					
Question		**Working**	**Answer**	**Mark**	**Additional Guidance**
16.	(a)	$5p = 20$	4	2	M1 add 16 to both sides A1 cao
	(b)	$-4-5=5q-2q$	–3	2	M1 for correct method isolate $\pm 3q$ A1 cao
	(c)	$6x-3-10-6x=$	–13	2	M1 at least one expansion correct A1 cao
					Total for Question: 6 marks

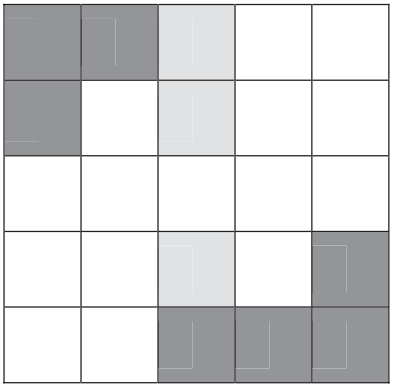
1MA0/1F					
Question		**Working**	**Answer**	**Mark**	**Additional Guidance**
17.		$x + 4x + \frac{1}{2} = 1$ $5x = \frac{1}{2}$, $x = \frac{1}{10}$ **OR** Choose a suitable number of balls (say 10) 5 will be red The other 5 need to be shared out in the ratio 1:4, hence 1 yellow and 4 blue	$\frac{4}{10}$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

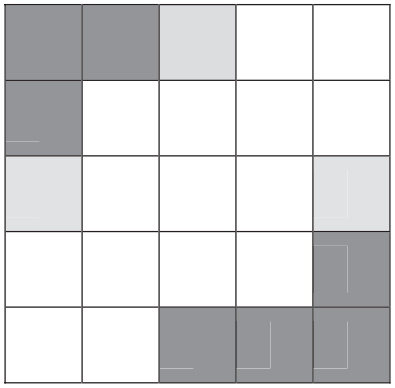
1MA0/1F					
Question		**Working**	**Answer**	**Mark**	**Additional Guidance**
19.		Number of prizes should buy is $\frac{3}{8} \times 1000$ = 375 **OR** Each triangle should win 1000 ÷ 8 times (=125) So 3 × 125 = 375	(376) and justification that matches answer	3	M1 estimate of probability A1 for answer > $\frac{3}{8}$ of 1000 C1 for justification that matches answer Number of prizes between 376 and 500 **OR** M1 1000 ÷ 8 A1 for answer > $\frac{3}{8}$ of 1000 C1 for justification that matches answer Number of prizes between 376 and 500
					Total for Question: 3 marks
20.	(a)		$5(x-2y)$	1	B1 cao
	(b)		$3p(q-4p)$	2	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
					Total for Question: 3 marks

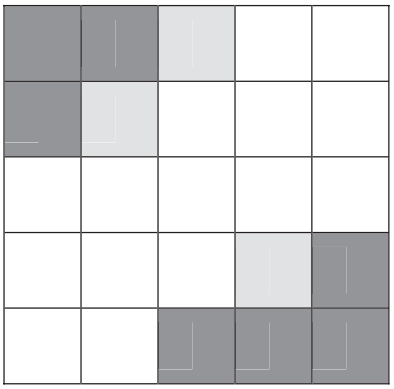
1MA0/1F					
Question		**Working**	**Answer**	**Mark**	**Additional Guidance**
21 **FE**		Area of the room = 4 × 8 + 4 × 6 = 56 Area of a tile = 0.5 × 0.5 = 0.25 Number of tiles = 56 ÷ 0.25 = 224 Cost = 4 × 224 **OR** No of tiles around room = 2 × lengths of room = 8, 16, 16, 12 Total number of tiles = 8 × 16 + 8 × 12 = 224 Cost = 4 × 224	£ 896	6	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 ÷ area of a tile M1 for 4 × number of tiles A1 cao **OR** 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 (12×16+8×4) A1 for at least one 'section' correct M1 for 4 × '224' A1 cao
					Total for Question: 6 marks

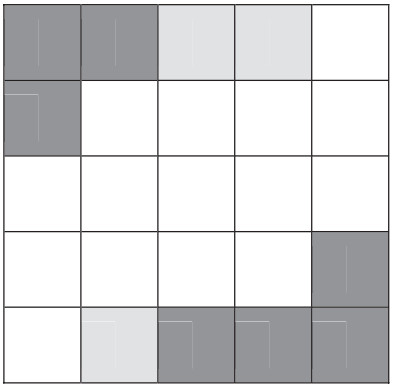












9 (c)

18.