Pie Charts

Question	Answer	Mark	Mark scheme	Additional guidance
12 (a)	Merit	B1	cao	
(b)	24	M1	for beginning to work with proportion eg 105 ÷ 7 (= 15) or 7 ÷ 105 (= 0.07 or 0.06....) or 360 × 7 (= 2520) **or** $\frac{360}{105}$ (= 3.4…) **or** works out a quantity for one sector eg $\frac{7}{105}\times 30$ (= 2), $\frac{7}{105}\times 75$ (= 5), $\frac{7}{105}\times 150$ (= 10),	
		M1	for a complete method eg $\frac{360}{105}\times 7$ oe or "3.4…" × 7 **or** 360 ÷ "15" or 360 × "0.06.." **or** "2520" ÷ 105 **or** 7 + "2" + "5" + "10"	
		A1	cao	

Question	Answer	Mark	Mark scheme	Additional guidance
14	Pie chart drawn and labelled	M1	for a method to calculate one angle eg $\frac{30}{30+10+50}\times 360$ (= 120) **or** $\frac{10}{30+10+50}\times 360$ (= 40) **or** $\frac{50}{30+10+50}\times 360$ (= 200) oe	
		A1	for all 3 angles correctly calculated **or** at least one correct and accurately drawn angle	Three angles correct in table is enough for this mark regardless of angles in the diagram.
		A1	for a fully correct labelled pie chart	Each sector must be labelled with the associated drink, not angle size.

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14	Correct pie chart	M1	for a method to find at least one angle eg $\frac{50}{(50+45+25)}\times 360$ (= 150) **or** $\frac{45}{(50+45+25)}\times 360$ (= 135) **or** $\frac{25}{(50+45+25)}\times 360$ (= 75) oe	
		A1	for at all 3 angles correctly calculated **OR** at least one correct and accurately drawn angle (from no more than 3 sectors)	Do not award for drawing if the intention is to show more than 3 sectors 3 angles correct in table is enough for this mark irrelevant of diagram
		A1	for a fully correct labelled pie chart	Labels as "City" from table not just angle size.

Question	Answer	Mark	Mark scheme	Additional guidance
16	Comments	C1	makes some comment about the labels **Acceptable examples** states what labels should be (not angles) labels are missing The label in the table does not match the label with the pie chart **Not acceptable examples** angles not marked on the pie chart	
		C1	comments about the inaccuracy of the angles in the pie chart **Acceptable examples** pie chart is not accurate / should be 108, 126,126 angles drawn inaccurately They haven't converted the number of potatoes to angles Need to scale the numbers in the table **Not acceptable examples** pie chart is wrong/ sectors are the wrong size (the angles) do not add up to 360	

Question	Answer	Mark	Mark scheme	Additional guidance
16 (a)	120	M1	for sensible use of proportion eg $\frac{135}{90}$ (= 1.5) **or** $\frac{90}{135}$ (= $\frac{2}{3}$) **or** 135 × 4 (= 540) **or** 135 ÷ 9 (=15) **or** 80 ÷ 90 (= 0.888...)	ie 135 ÷ 9 but not 135 ÷ 10 without 80 ÷ 9
		M1	for a complete method eg 80 × "1.5" **or** 80 ÷ "$\frac{2}{3}$" **or** "540" × $\frac{80}{360}$ **or** "15" × 8 **or** "0.888..." × 135	
		A1	cao	
(b)	$\frac{50}{540}$	M1	for method to find total number of cars, eg 135 × $\frac{360}{90}$ (= 540) **or** for $\frac{50}{135}\times\frac{1}{4}$ oe **or** begins to work with probability by using a numerator of 50 eg $\frac{50}{a}$ where a >50 and an integer	
		A1	for $\frac{50}{540}$ oe ft "540" from part (a)	Accept any equivalent fraction, decimal form 0.09(25..) or percentage form 9(.25..)%