SYSTEMATIC LISTING

Pearson Edexcel - Thursday 7 June 2018 - Paper 2 (Calculator) Foundation Tier

1.

7		(MYL) (MLY) (YML) (YLM) (LMY) (LYM)	M1 A1	for at least 3 correct different combinations fully correct list with no extras or repeats	for M1 ignore extras or repeats; accept words or unambiguous abbreviations

Pearson Edexcel – Specimen 1 - Paper 1 (Non-Calculator) Foundation Tier

2.

6	(a)		5412	B2	(B1 for any 4-digit even number using 4,5,1,2 **or** 5421)
	(b)		45, 54, 41, 14, 42, 24, 51, 15, 52, 25, 12, 21	P1	starts to list systematically; at least 6 correct seen (ignore repeats)
				A1	lists all 12 numbers (condone inclusion of **all** repeats 44, 55 etc)

Pearson Edexcel – Sample Papers - Paper 1 (Non-Calculator) Foundation Tier

3.

11		6	M1	for starting to list combinations
			A1	cao

OCR Tuesday 13 June 2017 – Morning (Calculator) Foundation Tier

4.

15			42 or 41.66…. or 41.7 isw	**4**	Accept $41.\dot{6}$ but do not accept 41.6 **B2** for 12 correct options shown or **B1** for options shown with at most 2 errors or omissions or repeats OR **B1** for [4 × 3 =] 12 [combinations] **B1** for FG, FH, AS, MS, ES only AND **M1** for $\frac{\textit{their } 5}{\textit{their } 12}$ [× 100] shown AND **B1** for *their* stated fractional probability, with denominator less than 25, correctly converted to percentage	<table><tr><td>F</td><td>S</td></tr><tr><td>F</td><td>G</td></tr><tr><td>F</td><td>H</td></tr><tr><td>A</td><td>S</td></tr><tr><td>A</td><td>G</td></tr><tr><td>A</td><td>H</td></tr></table> <table><tr><td>M</td><td>S</td></tr><tr><td>M</td><td>G</td></tr><tr><td>M</td><td>H</td></tr><tr><td>E</td><td>S</td></tr><tr><td>E</td><td>G</td></tr><tr><td>E</td><td>H</td></tr></table> Choices with only 1 language Implied only by [0].416[6..] or [0].417 *Their* (5 and 12) must come from list or 3 × 4 and *their* 12 ≠ *their* 5 Exact or correctly rounded to nearest integer or 1dp **Alternative method** **B3** for $\frac{1}{4} + \frac{2}{12}$ or **B2** for $\frac{1}{4}$ oe **and** $\frac{2}{12}$ oe or **B1** for $\frac{2}{12}$ oe

AQA Monday 8 June 2020 – Morning (Calculator) Foundation Tier

5.

Q	Answer	Mark	Comments
8	A E A R A T L E L R L T with no extras	B2	B1 three additional correct teams with no errors or repetitions or four additional correct teams with at most one error or repetition or five additional correct teams with one or two errors or repetitions SC1 A E E A E L R A R L T A T L or AE EA AR RA AT TA LE EL LR RL LT TL
	Additional Guidance		
	Full names are acceptable		
	Condone repetition of AE		
	Rows can be in any order		
	Accept lower case letters		
	For B1 condone teams in either column		

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6.

17(a)	Exactly ten options VV VS VC VM SS SC SM CC CM MM or exactly sixteen options VV VS VC VM SV SS SC SM CV CS CC CM MV MS MC MM	B2	may be given as words B1 any six correct options from the sixteen options
	Additional Guidance		
	Both correct sixteen options listed and correct ten options listed		B2

17(b)	**Alternative method 1**		
	360 ÷ 180 or 2	M1	implied by a correct angle or implied by a correctly drawn angle in pie chart ± 2°
	Any two of 45 × their 2 or 90° 75 × their 2 or 150° 50 × their 2 or 100° 10 × their 2 or 20°	M1dep	implied by any two correctly drawn angles in pie chart ± 2°
	Pie chart with four sectors drawn, two of which are correctly drawn with angles from 90°, 150°, 100° and 20°	M1dep	± 2° lines must be ruled
	Fully correct pie chart and sectors labelled with flavours	A1	± 2° lines must be ruled

Mark scheme for Question 17(b) continues on next page

17(b) cont	**Alternative method 2**		
	45 ÷ 180 × 100 or 25% or 75 ÷ 180 × 100 or $41\frac{2}{3}$% or 42% or 50 ÷ 180 × 100 or $27\frac{7}{9}$% or 28% or 10 ÷ 180 × 100 or $5\frac{5}{9}$% or 6%	M1	oe
	Any two of 45 ÷ 180 × 360 or 90° 75 ÷ 180 × 360 or 150° 50 ÷ 180 × 360 or 100° 10 ÷ 180 × 360 or 20°	M1dep	implied by any two correctly drawn angles in pie chart ± 2°
	Pie chart with four sectors drawn, two of which are correctly drawn with angles from 90°, 150°, 100° and 20°	M1dep	± 2° lines must be ruled
	Fully correct pie chart and sectors labelled with flavours	A1	± 2° lines must be ruled
	Additional Guidance		
	All four sectors must be correctly labelled with letters or words for the accuracy mark		

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7.

8(a)	R S T B R S B T R T S B R T B S R B S T R B T S	B2	may be presented vertically B1 4 or 5 correct orders and 0, 1 or 2 incorrect orders or the 6 correct orders and 1 or 2 incorrect orders or 24 possible orders with R in any place or STB, SBT, TSB, TBS, BTS, BST
	Additional Guidance		
	Correct orders start with R		
	Ignore repeated orders for both marks		

	Alternative method 1		
	1.50 + 15 (mins) or 13.50 + 15 (mins) or 2.05 (pm) or 14.05 as end of rowing machine or 2.09 (pm) or 14.09 as start of second piece of equipment	M1	oe condone starting on a different piece of equipment if equipment clearly stated
	their 2.05 (pm) + 4 (mins) + 13 (mins) + 4 (mins) + 35 (mins) + 4 (mins) + 1 (hour) 30 (mins) or their 2.09 (pm) + 13 (mins) + 4 (mins) + 35 (mins) + 4 (mins) + 1 (hour) 30 (mins)	M1dep	oe eg their 2.09 (pm) + 17 (mins) + 39 (mins) + 1 (hour) 30 (mins) calculation(s) shown that would lead to 4.35 if evaluated correctly
8(b)	4.35 (pm) or 16.35	A1	SC2 4.39 (pm) or 16.39 from 4 breaks
	Alternative method 2		
	15 (mins) + 13 (mins) + 35 (mins) + 1 (hour) 30 (mins) or 2 (hours) 33 (mins) or 153 (mins) or 15 (mins) + 4 (mins) + 13 (mins) + 4 (mins) + 35 (mins) + 4 (mins) + 1 (hour) 30 (mins) or 2 (hours) 45 (mins) or 165 (mins)	M1	oe eg 19 + 17 + 39 + 1 h 30 implied by 4.23 (pm) or 16.23 condone 2.33 or 2.45
	1.50 (pm) + their 2 (hours) 33 (mins) + 3 × 4 (mins) or 1.50 (pm) + their 2 (hours) 45 (mins) or 4.23 (pm) + 3 × 4 (mins)	M1dep	oe their 153 or their 165 must be correctly converted to hours and minutes calculation(s) shown that would lead to 4.35 if evaluated correctly
	4.35 (pm) or 16.35	A1	SC2 4.39 (pm) or 16.39 from 4 breaks

Additional Guidance continued on the next page

8(b) cont

Additional Guidance

	RSTB	RSBT	RTSB	RTBS	RBST	RBTS
End 1st	2.05	2.05	2.05	2.05	2.05	2.05
Start 2nd	2.09	2.09	2.09	2.09	2.09	2.09
End 2nd	2.22	2.22	2.44	2.44	3.39	3.39
Start 3rd	2.26	2.26	2.48	2.48	3.43	3.43
End 3rd	3.01	3.56	3.01	4.18	3.56	4.18
Start 4th	3.05	4.00	3.05	4.22	4.00	4.22
End 4th	4.35	4.35	4.35	4.35	4.35	4.35

Having 0, 1 or 2 breaks will score a maximum of M1	
Having 4 breaks may score the special case if evaluated correctly	
Condone using decimal time for a maximum of M1 (unless recovered) eg1 in alt 2, 0.15 + 0.13 + 0.35 + 1.3 = 2 h 33 min (recovered) eg2 in alt 2, 0.15 + 0.13 + 0.35 + 1.3 (= 1.93) eg3 in alt 1, 1.5 + 15 = 1.65 eg4 in alt 1, 2.26 pm + 90 = 3.16 pm (has added 0.9)	 at least M1 max M1 max M1 max M1
Condone 16.35pm	
May work in 24-hour clock throughout	
Times may just be listed as in the table in the AG but if an error is made they must have shown the amount of time intended to be added eg1 2.09, 2.22, 2.26, 3.02, 3.06, 4.36 (error seen at 3.01, time not shown) eg2 2.09, 13 mins, 2.22, 2.26, 35 mins, 3.02, 3.06, 4.36 (error seen at 3.01 but intention to add 35 implied)	 M1M0 M1M1
4.35 seen, answer 4 h 35 min	M2A0

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8.

9(a)	$\frac{1}{10}$ or 0.1(0) or 10%	B1	oe
	Additional Guidance		
	Ignore further working with any description of probability eg $\frac{1}{10}$, unlikely		B1
	Ignore further working with attempt to simplify a correct fraction eg $\frac{10}{100} = \frac{5}{20}$		B1
	1 : 10 in working with $\frac{1}{10}$ on answer line		B1
	1 : 10 on answer line		B0
	1 out of 10 without $\frac{1}{10}$ in working		B0

9(b)	ABC BAC CAB ACB BCA CBA	B2	Any order B1 for four additional correct orders with no errors or repetitions or five additional correct orders with at most one error or repetition
	Additional Guidance		
	Do not allow repetition of ABC for B2		

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9.

6a	BHS RHS BHP RHP BCS RCS BCP RCP	B2	B1 for four additional correct combinations with no errors or repetitions or five additional correct combinations with at most one error or repetition or six or seven additional correct combinations with at most two errors or repetitions
	Additional Guidance		
	Do not allow repetition of BHS for B2		
	Ingredients may be written as full words		
	Accept letters or words in any order eg BPC for BCP		
	Do not accept tree diagrams without combinations listed		

6b	$\frac{2}{8}$ or $\frac{1}{4}$	B1ft	ft their (a) with at least three additional combinations, at least one of which contains cheese and pickle ignore further working if attempting to simplify
	Additional Guidance		
	$\frac{2}{8}$ or $\frac{1}{4}$ is B1, if not $\frac{2}{8}$ or $\frac{1}{4}$ refer to (a) for possible ft		
	BHS, BHS, BHP, BCS, BCP, RHS, RHP, RCS and RCP in (a) with answer $\frac{2}{9}$		B1ft
	Answer given only as decimal or percentage		B0

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10.

6	Cards: 1 and 2 — Total: 3 Cards: 3 and 6 — Total: 9 Cards: 4 and 7 — Total: 11 Cards: 5 and 9 — Total: 14 Cards: 8 and 11 — Total: 19 Cards: 10 and 12 — Total: 22	B4	B3 for any three or four pairs giving the correct totals B2 for any two pairs giving the correct totals B1 for any one pair giving the correct total
	Additional Guidance		
	Mark pairs from top down and mark table only		
	Numbers in pairs can be reversed eg 6 and 3 Total 9		
	Accept first use of a number, in a correct or incorrect pair, but discount further use of the same number in a subsequent pair		
	Do not accept repeated numbers eg 7 and 7 or 11 and 11 as a correct pair (this is incorrect, not discounted)		
	Do not accept use of other numbers eg 9 and 13 is not a correct pair		
	4 and 5 Total 9 correct 5 and 6 Total 11 discount (5 already used in a correct pair) 6 and 8 Total 14 correct (first use of 6 as 5 and 6 discounted) 8 and 11 Total 19 discount (8 already used in a correct pair) 10 and 12 Total 22 correct		3 correct B3
	3 and 6 Total 9 correct 7 and 4 Total 11 correct (order reversed) 7 and 7 Total 14 discount (7 already used in a correct pair) 7 and 12 Total 19 discount (7 already used in a correct pair) 10 and 12 Total 22 correct (first use of 12 as 7 and 12 discounted)		3 correct B3

Additional Guidance continues on the next page

6 cont	2 and 7 Total 9 discount (2 already used in correct pair) 5 and 6 Total 11 correct 4 and 10 Total 14 correct 9 and 10 Total 19 discount (10 already used in a correct pair) 11 and 11 Total 22 incorrect (11 is a repeated number in a pair)	2 correct B2
	3 and 3 Total 9 incorrect (3 is a repeated number in a pair) 3 and 8 Total 11 discount (3 already used in an incorrect pair) 6 and 8 Total 14 correct (first use of 8 as 3 and 8 discounted) 9 and 10 Total 19 correct 7 and 15 Total 22 incorrect (15 is not a card number)	2 correct B2
	3 and 5 Total 9 incorrect 3 and 8 Total 11 discount (3 already used in an incorrect pair) 7 and 7 Total 14 incorrect (7 is a repeated number in a pair) 7 and 12 Total 19 discount (7 already used in an incorrect pair) 10 and 12 Total 22 correct (first use of 12 as 7 and 12 discounted)	1 correct B1