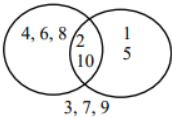


VENN DIAGRAMS

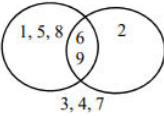
Pearson Edexcel – Thursday 4 June 2020 - Paper 2 (Calculator) Higher Tier

1.

2	(a)	Venn diagram	M1	for correct numbers in at least one region	Ignore all entries except the region you are marking for each method mark
			M1	for correct numbers in at least two regions	
			A1	for all regions correct	
	(b)	$\frac{2}{10}$	M1	for $\frac{a}{10}$ where $0 < a < 10$ and a is an integer or $\frac{2}{b}$ where $b > 2$ and b is an integer or ft diagram	
			A1	$\frac{2}{10}$ oe or ft diagram	Accept any equivalent fraction, decimal form 0.2 or percentage form 20%

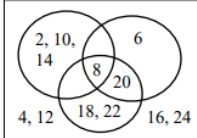
Pearson Edexcel - Tuesday 11 June 2019 - Paper 3 (Calculator) Higher Tier

2.

1	(a)	6, 9	M1	for 6, 9 in the intersection only	Ignore all entries except the region you are marking for each method mark
		1, 5, 8 2 3, 4, 7	M1	for 1, 5, 8 in set A only or 2 in set B only or 3, 4, 7 in set $(A \cup B)'$ only	
			C1	for all numbers correctly placed in the Venn Diagram	
	(b)	$\frac{2}{9}$	M1	ft for identification of 2 or 9 or ft diagram	
			A1	$\frac{2}{9}$ oe or ft diagram	Accept any equivalent fraction, decimal form 0.22(22...) or percentage form 22(.22...)%

Pearson Edexcel - Thursday 8 November 2018 - Paper 2 (Calculator) Higher Tier

3.

1	(a)	Venn diagram	C4	fully correct Venn diagram	
			(C3)	7 of the 8 regions correct or for a diagram with only one number incorrectly placed)	
			(C2)	5 or 6 of the 8 regions correct)	Need not be written as a fraction or probability at this stage. eg could be a ratio 1:12
			(C1)	3 or 4 of the 8 regions correct)	
	(b)	$\frac{1}{12}$	M1	ft for identification of 1 or 12 eg from the diagram	Acceptable equivalents are (eg, could fit) any fraction equivalent to $\frac{1}{12}$, 0.08(33...) or 8(.33...)%
			A1	ft oe	

Pearson Edexcel - Tuesday 13 June 2017 - Paper 3 (Calculator) Higher Tier

4.

1	(a)		Venn Diagram	B1 for labels on diagram M1 for just 15 in the intersection M1 for just 5 and 25 in only set B or just 3, 9, 21 and 27 in only set A or just 1, 7, 11, 13, 17, 19, 23, 29 in $(A \cup B)$ C1 for all numbers correctly placed in the Venn Diagram Ignore all entries except the region you are marking for each method mark
	(b)		$\frac{7}{15}$	P1 ft for $\frac{7}{a}$ where $a \geq 7$ or $\frac{b}{15}$ where $b \leq 15$ A1 ft $\frac{7}{15}$ oe

Pearson Edexcel - Specimen Papers Set 2 - Paper 2 (Calculator) Higher Tier

5.

5	(a)(i)		10, 12, 14, 15, 16, 18	B1 cao
	(ii)		12, 18	B1 cao
	(b)		$\frac{7}{10}$	M1 for 7 or indicating correct region or for 10, 14, 16, 11, 13, 17, 19 listed A1 for $\frac{7}{10}$ oe

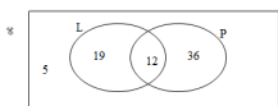
OCR GCSE – Tuesday 3 November 2020 – Paper 4 (Calculator) Higher Tier

6.

4		$\frac{20}{60}$ oe	5	B3 for $x=7$ OR B1 for $x + 2x + x - 1 + 5x - 2$ or better M1 for simplifying <i>their</i> linear equation to the form $ax + b = c$ or better e.g. $9x - 3 = 60$ M1 for $x = (60 + 3) \div 9$ AND M1 for $\frac{\text{their}20}{60}$ If 0 scored SC1 for $\frac{3x-1}{60}$	Equivalent includes $\frac{1}{3}$, .333[.] and 33.3...% e.g. $9x - 3$ <i>their</i> linear equation must include 60 FT <i>their</i> linear equation and show the steps to correctly solve it. third M1 FT <i>their</i> value of x so <i>their</i> 20 is <i>their</i> $(3x - 1)$ evaluated with <i>their</i> value of x

OCR GSCE – Tuesday 6 November 2018 – Paper 4 (Calculator) Higher Tier

7.

9	(a)		3	B2 for three correct entries, ignore labels or B1 for one element in the correct place	
	(b)	$\frac{36}{72}$ oe	2	FT <i>their</i> labelled Venn diagram (2 sets) for 2 marks e.g. $\frac{their36}{72}$ B1 for $\frac{k}{72}$ where $k < 72$	isw cancelling and conversion, accept 50% for 2 marks

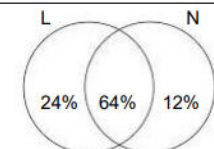
OCR GSCE – Thursday 24 May 2018 – Paper 4 (Calculator) Higher Tier

8.

14	(a)	27	1		
	(b)	$\frac{27}{45}$ or $\frac{3}{5}$ or [0].6 or $\frac{their(a)}{45}$ oe	2	B1 for $\frac{27}{n}$ or $\frac{their(a)}{n}$ or $\frac{k}{45}$ (n, k are positive integers and fractions are proper)	Any fraction or percentage equivalent to $\frac{27}{45}$ for 2 marks, the fractions must be proper and isw if conversion or cancelling after an acceptable answer

OCR GSCE – Sample Papers – Paper 6 (Calculator) Higher Tier

9.

11	(a)		3 1 AO2.3a 2 AO2.3b	B1 for 24% in L and B1 for 12% in N and M1 for $100 - (their '12' + their '24')$ in overlap	Condone universal set missing
	(b)	(i) $\frac{64}{88}$ oe	2 2 AO1.3a	M1 for 64 or 88	FT <i>their</i> Venn diagram
		(ii) $\frac{24}{36}$ oe	2 2 AO1.3a	M1 for 24 or 36	FT <i>their</i> Venn diagram

AQA GSCE – Tuesday 19 May 2020 – Paper 1 (Non - Calculator) Higher Tier

10.

7	12 in correct position	B1	
	24 in correct position	B1	
	11 in correct position or 33 in correct position or their value in G only is three times their value in the intersection or their four values sum to 80	B1ft	ft $\frac{1}{4} \times (80 - 12 - \text{their } 24)$ ft $\frac{3}{4} \times (80 - 12 - \text{their } 24)$ for this mark allow non-integers or values rounded or truncated to the nearest integer
	12, 24, 11 and 33 in correct positions	B1	
	Additional Guidance		
	Mark the Venn diagram only		

AQA GCSE – Thursday 8 June 2020 – Paper 3 (Calculator) Higher Tier

11.

1	A or B or both	B1	
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AQA GCSE – Thursday 6 June 2019 – Paper 2 (Calculator) Higher Tier

12.

4	$A \cap B$	B1	
	Additional Guidance		

AQA GCSE – Tuesday 11 June 2019 – Paper 3 (Calculator) Higher Tier

13.

22(a)	$\frac{12}{29}$	B1	
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22(b)	$\frac{8}{15}$	B1	
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AQA GCSE – Thursday 7 June 2018 – Paper 2 (Calculator) Higher Tier

14.

25	$\frac{x}{x+35} = \frac{5}{12}$ or $\frac{35}{x+35} = \frac{7}{12}$ or $\frac{x}{35} = \frac{5}{7}$ or $x : 35 = 5 : 7$ or links $\frac{7}{12}$ to 35	M1	oe eg $x + 35 = 60$ or links $\frac{1}{12}$ to 5
	$12x - 5x = 175$ or $7x = 175$ or $420 - 245 = 7x$ or $(x =) 25$ or $\frac{25}{60}$	M1dep	oe collects terms 25 may be seen in section labelled x on Venn diagram
	$(y =) 150 - 47 - 35 - \text{their } 25$ or 43	M1dep	dep on M2 43 may be seen in section labelled y on Venn diagram
	$\frac{43}{150}$ or 0.286... or 0.287 or 0.29 or 28.6...% or 28.7% or 29%	A1	
	Additional Guidance		
Accept $\frac{7}{12} = 35$		M1	
Ignore any incorrect cancelling or change of form (fraction, decimal or percentage)			

AQA GCSE – Thursday 6 November 2017 – Paper 2 (Calculator) Higher Tier

15.

18(a)	$A \cap B'$	B1	
	Additional Guidance		

18(b)	$(A \cup B)'$	B1	
	Additional Guidance		

AQA GCSE – Wednesday 8 November 2017 – Paper 3 (Calculator) Higher Tier

16.

14(a)	$6 + 5 + 2x + x + 2 = 31$ or $3x + 13 = 31$ or $3x = 18$ or $\frac{5+2x}{31}$ or $\frac{5+2x}{3x+13}$	M1	oe equation $6 + 5 + 2(6) + 6 + 2 = 31$ (embedded answer)	
	$(x =) 6$	A1		
	$\frac{17}{31}$ or 0.548... or 0.55 or 54.8...% or 55%	A1ft	ft $\frac{5 + \text{their } 2x}{31}$ and M1 A0 or ft $\frac{23 - \text{their } x}{31}$ and M1 A0	
	Additional Guidance			
	$x = 6$, answer $\frac{12}{31}$ or answer $\frac{12}{31}$ alone (implied $x = 6$)			M1A1A0
	$3x = 18$, $x = 5$, answer $\frac{15}{31}$ or $\frac{18}{31}$			M1A0A1ft

14(b)	$\frac{5}{11}$ or 0.45... or 45(...)%	B1	oe
	Additional Guidance		

AQA GCSE – Thursday 8 June 2017 – Paper 2 (Calculator) Higher Tier

17.

18(a)	Fully correct diagram ξ	B3	B2 Two or three correct numbers in correct positions B1 One correct number in correct position
	Additional Guidance		
	Three correct numbers in correct positions and one missing		B2
	Two correct numbers in correct positions and two missing		B2

18(b)	$\frac{14}{25}$ or 0.56 or 56%	B1ft	Correct or ft their diagram oe fraction
	Additional Guidance		
	$\frac{14}{25}$ or 0.56 or 56% always scores B1		
	ft answer correct with subsequent incorrect simplification		B1ft
	Ratio eg 14 : 25		B0
	Expressed only in words eg 14 out of 25		B0
	$\frac{14}{25}$ and 14 out of 25		B1
	$\frac{14}{25}$ seen with change to incorrect decimal or incorrect percentage eg $\frac{14}{25}$ and answer 0.8		B1
	Ignore chance words if $\frac{14}{25}$ seen eg $\frac{14}{25}$ and answer likely		B1
	For a ft answer that is only seen as a decimal or %, accept truncation or rounding to at least 2sf		

AQA GCSE – Sample Paper 2 (Calculator) Higher Tier

18.

<p>6(a)</p>		<p>B3</p>	<p>B2 Any 2 or 3 of the 4 sections correct B1 Any 1 of the 4 sections correct</p>
<p>6(b)</p>	<p>$\frac{1}{12}$</p>	<p>B1ft</p>	<p>oe ft their Venn diagram</p>