

Sets & Venn Diagrams

Mark Scheme 2

Level	IGCSE
Subject	Maths (0580)
Exam Board	Cambridge International Examinations (CIE)
Paper Type	Extended
Topic	Number
Sub-Topic	Sets & Venn Diagrams
Booklet	Mark Scheme 2

Time Allowed: 53 minutes

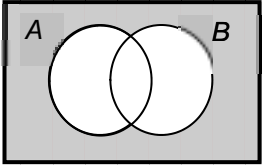
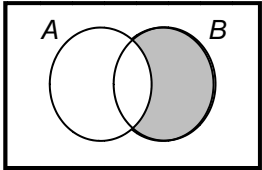
Score: /44

Percentage: /100

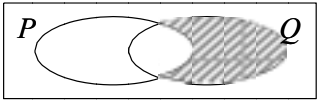
Grade Boundaries:

A*	A	B	C	D	E	U
>85%	75%	60%	45%	35%	25%	<25%



1	ξ		1	
	ξ			

2	(a)	19 2 1 8	2	B1 for any two correct
	(b)	1 8 19 2		

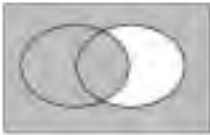
3	(a)	i, j	1		
		i, j, k, m, n			1
		2			1
	(b)	$\frac{2}{3}$			1
	(c)				1
(d)	\subset or \subseteq	1			

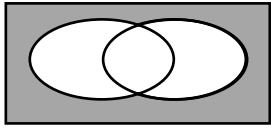


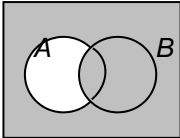
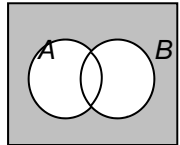
4	(a)		2	B for 2 of the 4 regions correct
	(b)	7 8	1FT	
	(c)	1	1FT	

5	(a)	$4 - x$ correctly placed $5 - x$ correctly placed 7 correctly placed	1	SC3 for 1, 2 and 7 all correctly placed instead of expressions in x M1 FT from their Venn diagram, condone omission of one subset A1 Must be in the form $a + bx = c$, ie each side simplified, or better B1 1 ISW cancelling or conversion after correct answer seen 1FT FT from their Venn diagram and their x provided $n(B \cap P \cap T) \neq 5$ 1FT FT from their Venn diagram 1FT FT from their Venn diagram 1 1
	(b)	$4 + 11 + (6 - x) + x + 9 + (4 - x) + (5 - x) + 7 = 40$ oe $46 - 2x = 40$ nfw	M1	
	(c) (i)	$\frac{9}{40}$ or 0.225 or 22.5%	A1	
	(ii)	2	B1	
	(iii)	15	1	
	(iv)	25	1FT	
	(v)	4	1FT	
	(d)	Correct region shaded. 	1	



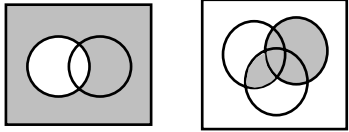
6	(a) $\frac{5}{50}$ oe	1	
	(ii) $\frac{11}{50}$ oe	1	
	(b) $\frac{11}{16}$ oe	1	
	(c) $\frac{380}{2450}$ oe	2	
	(d) 	1	

7 (a)	$\frac{3}{11}$	1	
(b)		1	

8		1	
		1	



9	(a)	4	2	M1 for attempt at sum of all numeric and x terms equated to 74 1FT = $18 + 2 \times$ their (a) 1
	(b)	26		
	(c)	8		

10		2	B1 for one correct
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