Mark scheme

Sets and Venn diagrams

Mathematics 0580 · Questions from Paper 1, Paper 2 and Paper 3

Total marks

34

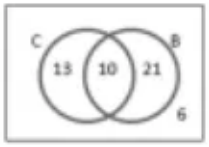
MARKS FOR EACH QUESTION

1	2	3	4	5	6	7	8	9	10	Total
2	3	2	2	3	3	7	4	4	4	**34**

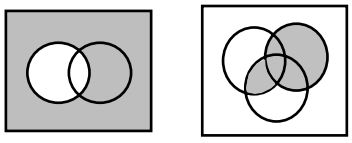
Question 1 [2]

1(a)	*a*, *b*, *c*, *d*	**1**	
1(b)	6	**1**	

Question 2 [3]

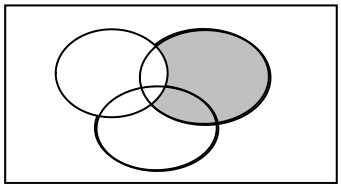
2(a)		**2**	**B1** for at least 2 figures in the correct places
2(b)	44	**1**	**FT** *their* 3 values from **(a)** or 50 – *their* 6, provided answer is between 0 and 50

Question 3 [2]

3		**2**	**B1** for one correct

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Question 4 [2]

4 **(a)**	18	**1**	
(b)		**1**	

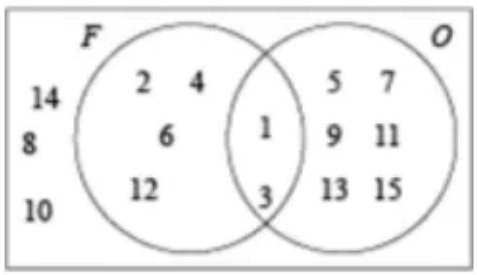
Question 5 [3]

5(a)	4 cao	**1**	
5(b)	10, 20	**1**	
5(c)	An odd number or decimal in the range $1 \leqslant x \leqslant 20$	**1**	

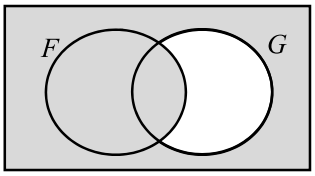
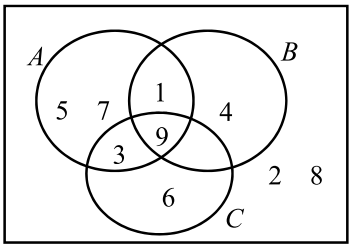
Question 6 [3]

6(a)	9	**1**	
6(b)(i)	1, 3, 4, 6, 9	**1**	
6(b)(ii)	2	**1**	**FT** 5 – numbers of odds in **(b)(i)**

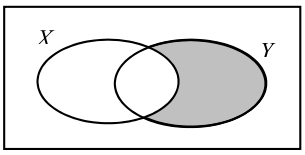
Question 7 [7]

7(a)	$A \cup B$ $A \cap B$	**2**	**B1** for each
7(b)(i)		**2**	**B1** for 2 or 3 correctly completed regions
7(b)(ii)	One of 5, 7, 9, 11, 13, 15	**1**	**FT** *their* Venn diagram
7(b)(iii)	12	**1**	**FT** *their* Venn diagram
7(b)(iv)	$\frac{8}{15}$ oe	**1**	**FT** *their* Venn diagram

Question 8 [4]

8(a)		**1**	
8(b)(i)		**2**	**B1** for four out of the eight regions correct
8(b)(ii)	Any even square number that is also a multiple of 3	**1**	

Question 9 [4]

9(a)		**1**	
9(b)(i)	$\frac{9}{16}$ oe	**2**	**B1** for $\frac{9}{k}$ or $\frac{k}{16}$ provided fraction is less than 1
9(b)(ii)	46	**1**	

Question 10 [4]

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

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