

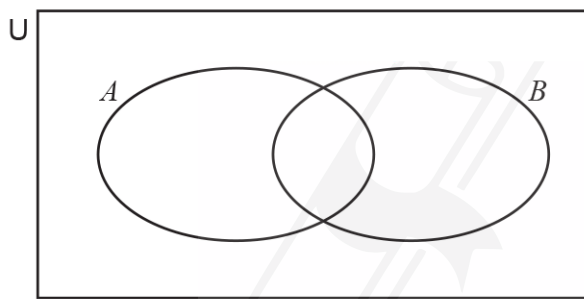
Chapter 9

Sets

01. 0607_m23_qp_22 Q: 13

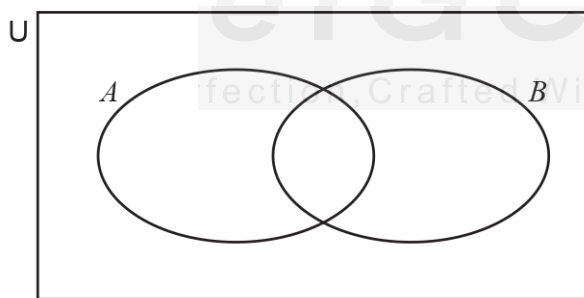
Shade the given sets in each of these Venn diagrams.

(a) $A' \cup B'$



[1]

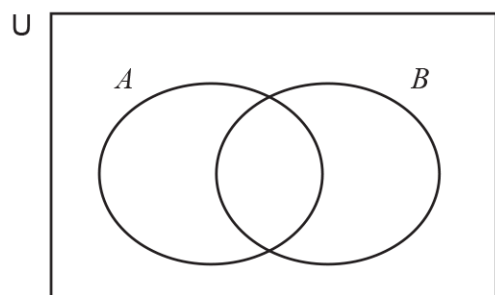
(b) $(A \cap B)'$



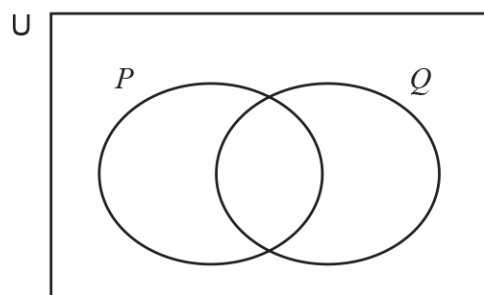
[1]

02. 0607_s23_qp_22 Q: 9

On the Venn diagrams, shade the given subsets.



$A \cup B$



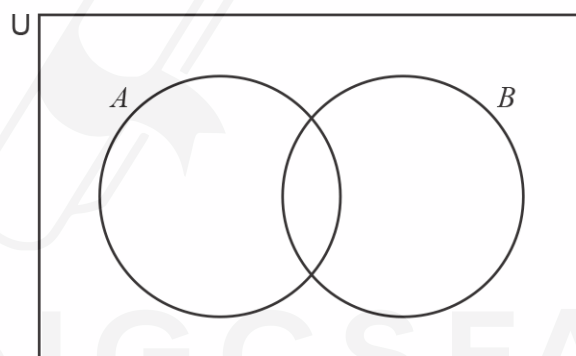
$(P' \cap Q) \cup (P \cap Q')$

[2]

03. 0607_s23_qp_23 Q: 13

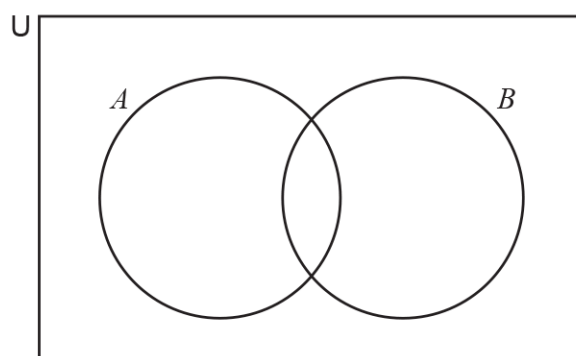
Shade the given region on the Venn diagram.

(a) $A' \cap B'$



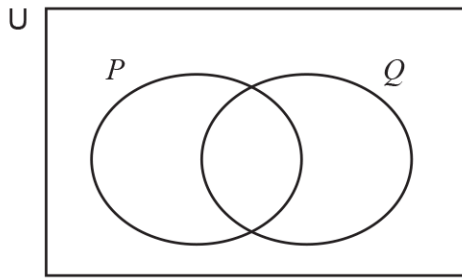
[1]

(b) $(A \cup B)'$



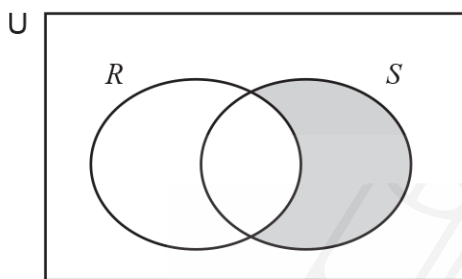
[1]

(a) Shade $P \cup Q$.



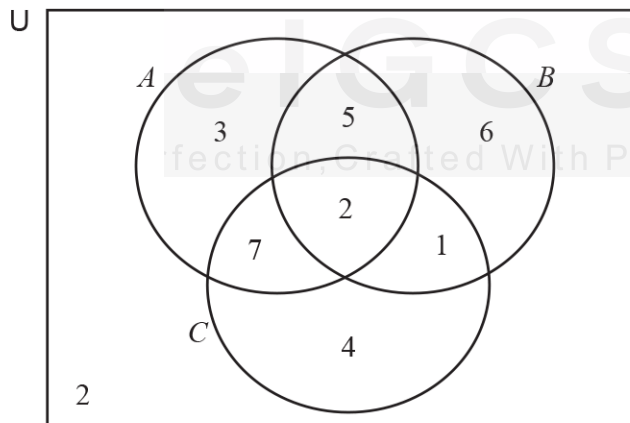
[1]

(b) Describe the shaded area using set notation.



..... [1]

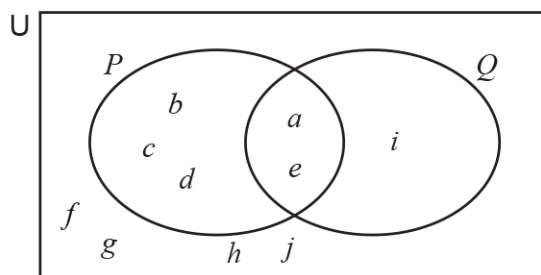
(c) The Venn diagram shows the number of elements in each subset.



Find $n((B' \cap C) \cap A)$.

..... [1]

05. 0607_w22_qp_23 Q: 9



$$U = \{a, b, c, d, e, f, g, h, i, j\}$$

Complete each statement.

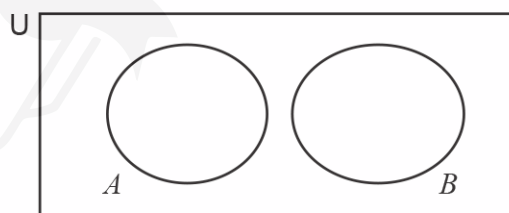
(a) $(P \cup Q)' = \{\dots\dots\dots\}$ [1]

(b) $\{a, e\} = P \dots\dots Q$ [1]

(c) $n(P' \cup Q) = \dots\dots\dots$ [1]

06. 0607_s21_qp_23 Q: 6

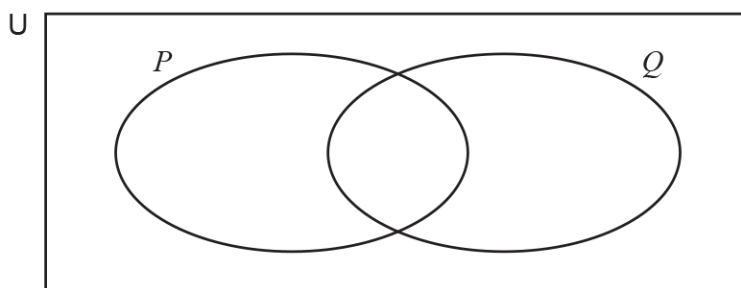
On the Venn diagram, shade $A \cup B$.



[1]

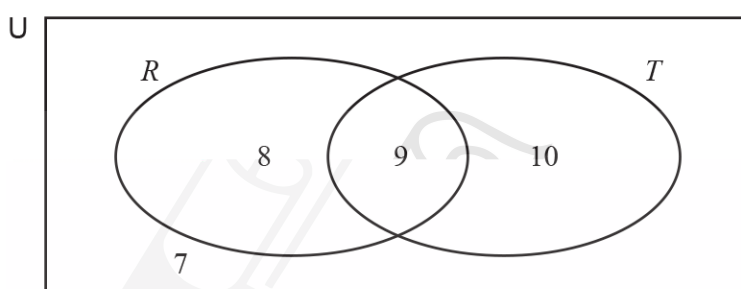
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(a) Shade the region $(P \cup Q)'$.



[1]

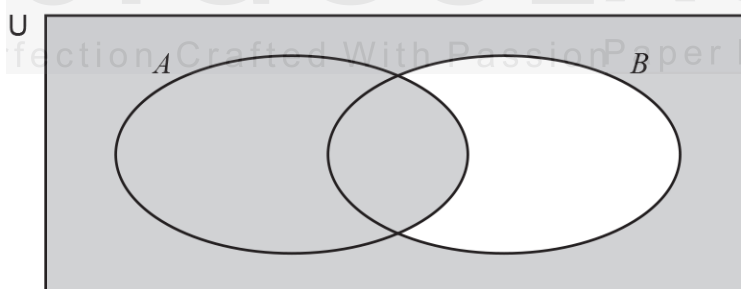
(b) The Venn diagram shows the number of elements in each region.



Find $n(R \cap T)$.

..... [1]

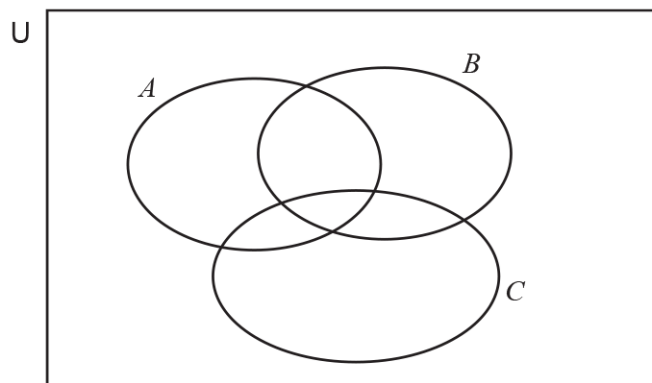
(c) Use set notation to describe the shaded region.



..... [1]

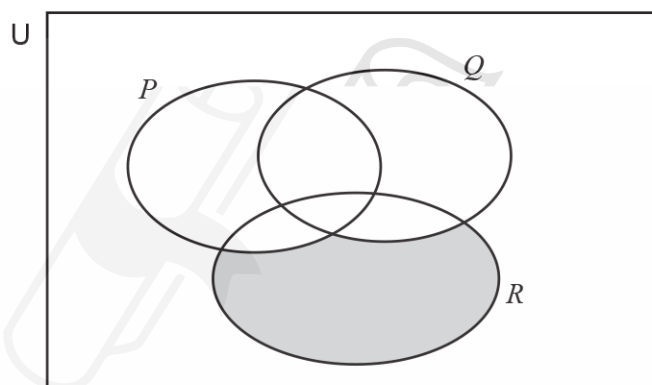
08.0607_s20_qp_23 Q: 15

(a) On the Venn Diagram, shade the set $A \cap B \cap C'$.



[1]

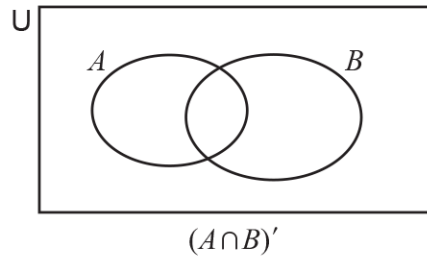
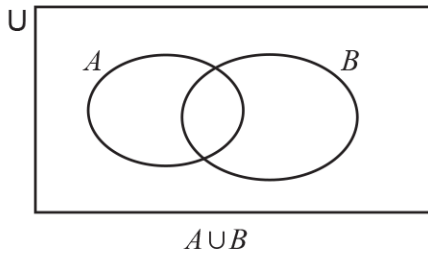
(b) Use set notation to describe the shaded region.



[1]

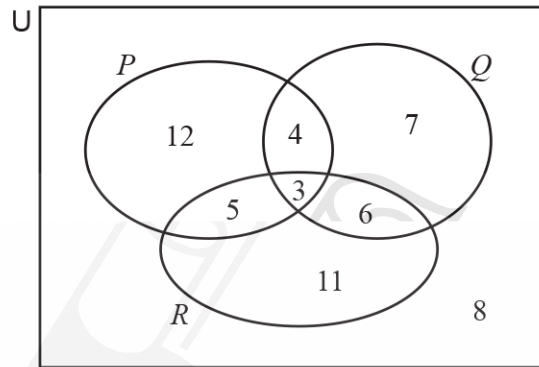
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(a) In each Venn diagram, shade the given set.



[2]

(b) In this Venn diagram, the number of elements in each of the subsets is shown.



Find.

(i) $n(P \cup (Q \cap R))$

..... [1]

(ii) $n((P \cup Q) \cap R')$

..... [1]

10. 0607_s19_qp_21 Q: 10

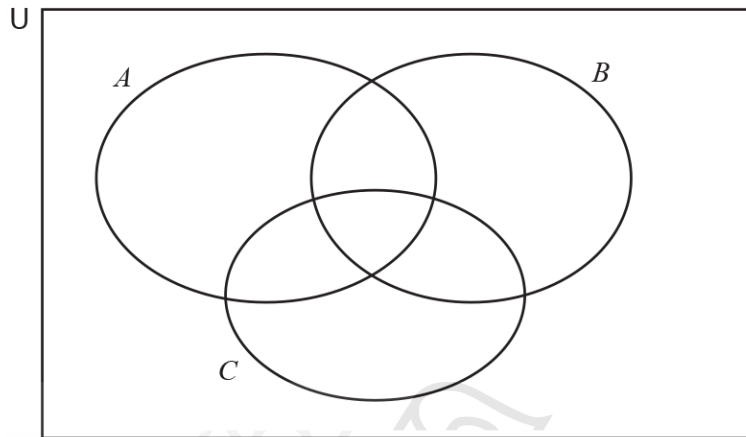
$U = \{\text{integers from 1 to 12}\}$

$A = \{1, 2, 4, 5, 12\}$

$B = \{2, 3, 4, 6, 10\}$

$C = \{1, 2, 8, 9, 10\}$

(a) Complete the Venn Diagram.



[2]

(b) Find $n(A \cap (B \cup C)')$.

..... [1]

11. 0607_s19_qp_22 Q: 11



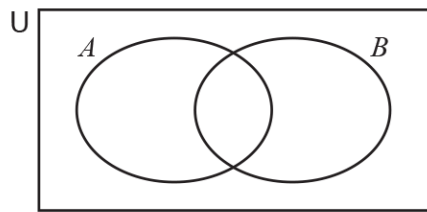
$n(U) = 25$ $n(P) = 10$ $n(Q) = 17$ $n(P \cup Q)' = 5$

Complete the Venn diagram.

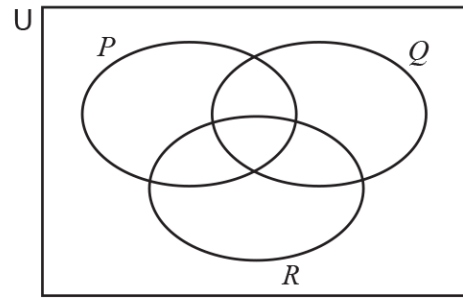
[2]

12. 0607_s18_qp_21 Q: 11

In each Venn diagram, shade the region indicated.



$$(A \cup B)'$$

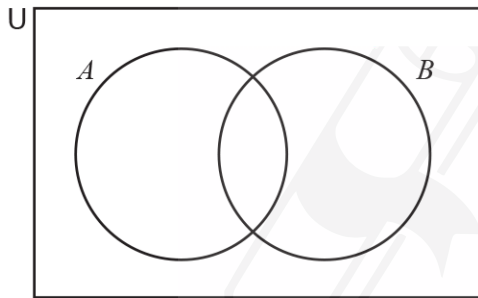


$$(P \cup Q) \cap R$$

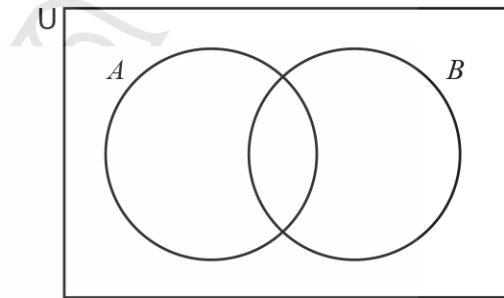
[2]

13. 0607_s18_qp_22 Q: 13

Shade the given sets in each of these diagrams.



$$A' \cap B$$



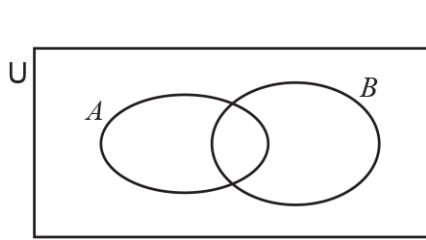
$$(A' \cup B)'$$

[2]

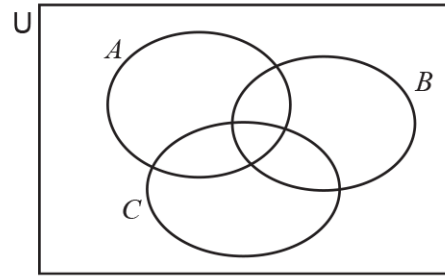
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14. 0607_s17_qp_22 Q: 9

(a) In each diagram, shade the region indicated.



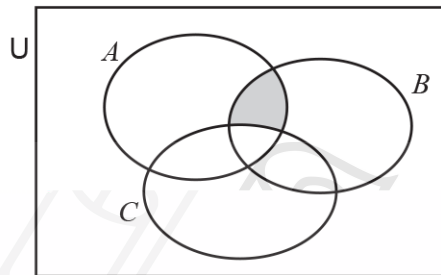
$A \cap B'$



$(A \cup C) \cap B'$

[2]

(b) Use set notation to describe the shaded region.

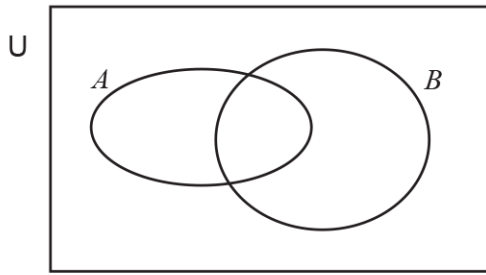


..... [1]

15. 0607_w17_qp_21 Q: 8

Shade the region indicated in each of these Venn diagrams.

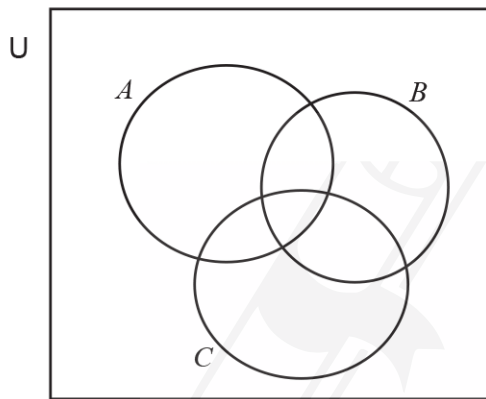
(a)



$$A' \cap B'$$

[1]

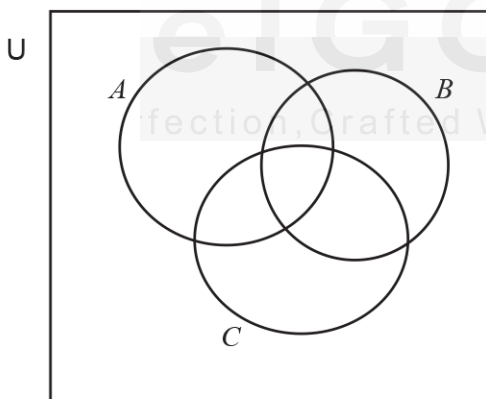
(b)



$$A \cup (B \cap C)$$

[1]

(c)

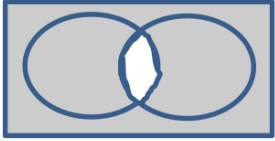


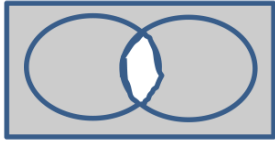
$$A \cap B \cap C'$$

[1]

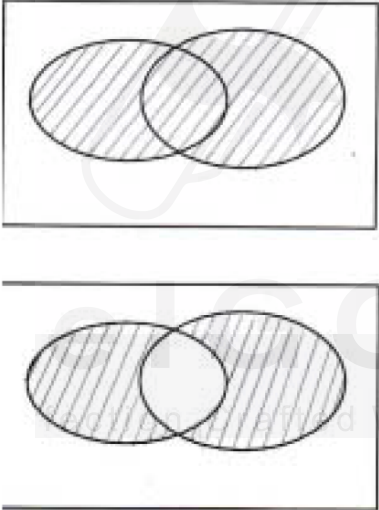


01. 0607_m23_ms_22 Q: 13

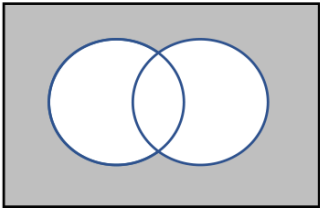
Question	Answer	Marks	Partial Marks
(a)		1	

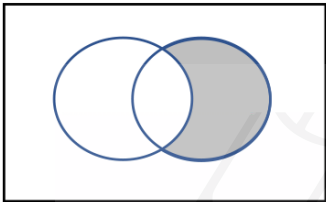
Question	Answer	Marks	Partial Marks
(b)		1	

02. 0607_s23_ms_22 Q: 9

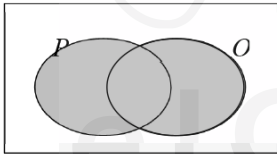
Question	Answer	Marks	Partial Marks
	<p>Correct shading</p> 	2	B1 for each

03. 0607_s23_ms_23 Q: 13

Question	Answer	Marks	Partial Marks
(a)	Correct sketch 	1	

Question	Answer	Marks	Partial Marks
(b)	Correct sketch 	1	

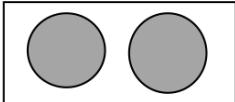
04. 0607_s22_ms_21 Q: 11

Question	Answer	Marks	Partial Marks
(a)		1	
(b)	$R' \cap S$ oe	1	
(c)	7 only	1	

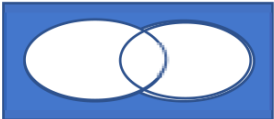
05. 0607_w22_ms_23 Q: 9

Question	Answer	Marks	Partial Marks
(a)	f, g, h, j	1	
(b)	\cap	1	
(c)	7	1	

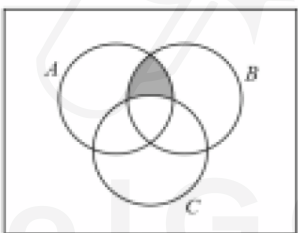
06. 0607_s21_ms_23 Q: 6

Question	Answer	Marks	Partial Marks
		1	

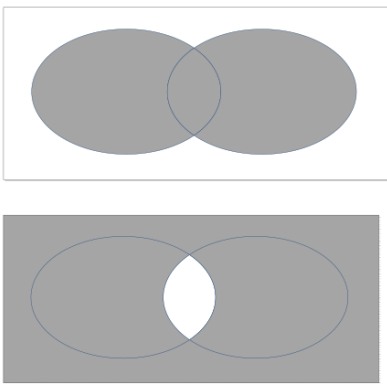
07. 0607_w21_ms_22 Q: 10

Question	Answer	Marks	Partial Marks
(a)	Correct shading 	1	
(b)	8	1	
(c)	$A \cup B'$ oe	1	

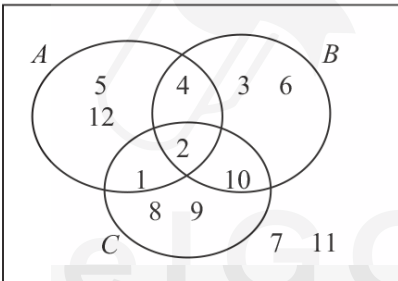
08. 0607_s20_ms_23 Q: 15

Question	Answer	Marks	Partial Marks
(a)		1	
(b)	$(P \cup Q)' \cap R$	1	

09. 0607_w20_ms_22 Q: 11

Question	Answer	Marks	Partial Marks
(a)		2	B1 for each
(b)(i)	30	1	
(b)(ii)	23	1	

10. 0607_s19_ms_21 Q: 10

Question	Answer	Marks	Partial Marks
(a)		2	B1 for 1, 2 or 3 numbers misplaced
(b)	2	1	FT <i>their</i> diagram

11. 0607_s19_ms_22 Q: 11

Question	Answer	Marks	Partial Marks
	3 7 10	2	B1 for 7 in correct place If B0, SC1 for $10 - k$, k , $17 - k$

12. 0607_s18_ms_21 Q: 11

Question	Answer	Marks	Partial Marks
		2	B1 for each

13. 0607_s18_ms_22 Q: 13

Question	Answer	Marks	Partial Marks
		2	B1 for each

14. 0607_s17_ms_22 Q: 9

Question	Answer	Marks	Partial Marks
(a)		2	B1 for each
(b)	$A \cap B \cap C'$ oe	1	

15. 0607_w17_ms_21 Q: 8

Question	Answer	Marks	Partial Marks
(a)		1	
(b)		1	
(c)		1	