

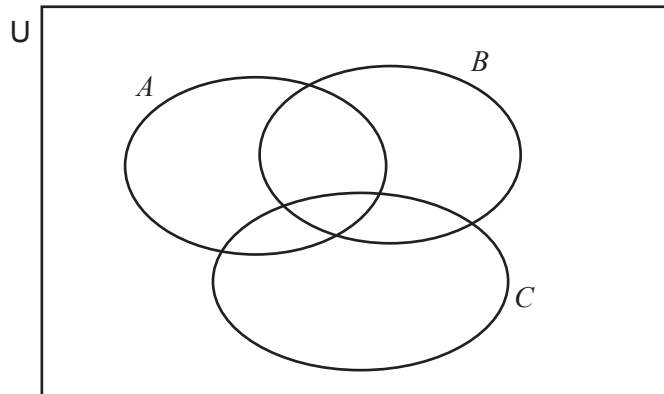
SMART EXAM RESOURCES

TOPIC: NUMBERS

SUB-TOPIC: SETS

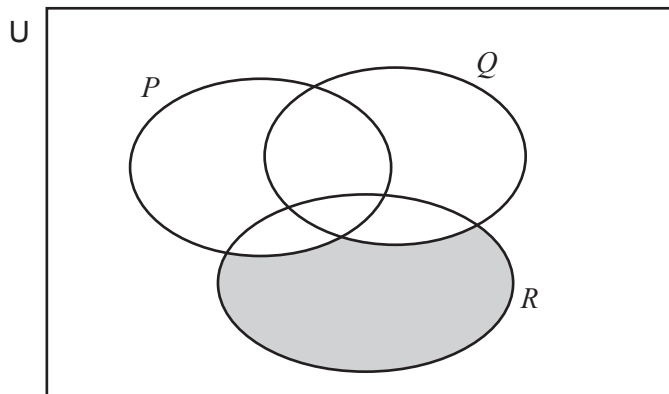
SET-1-QP-MS

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



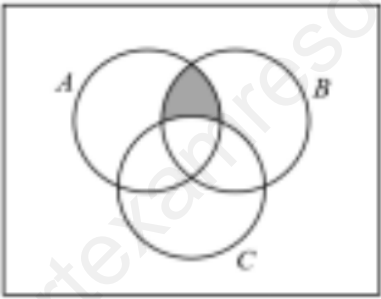
[1]

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



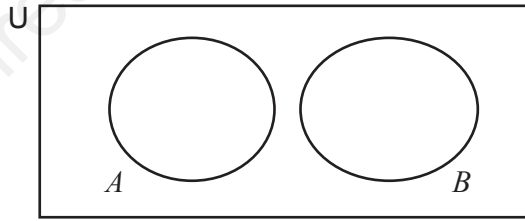
..... [1]

MARK SCHEME:

(a)		1	
(b)	$(P \cup Q)' \cap R$	1	

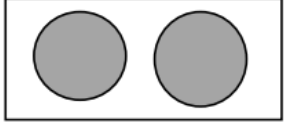
2

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



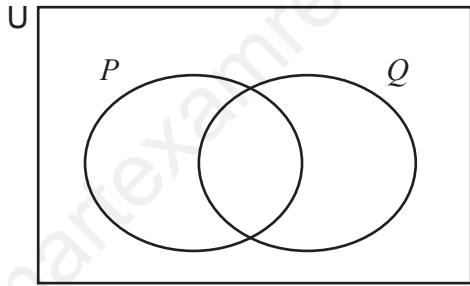
[1]

MARK SCHEME:

	1	
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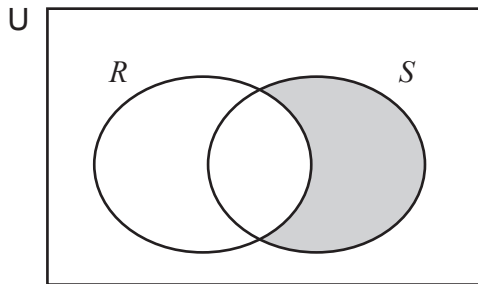
3

(a) Shade $P \cup Q$.



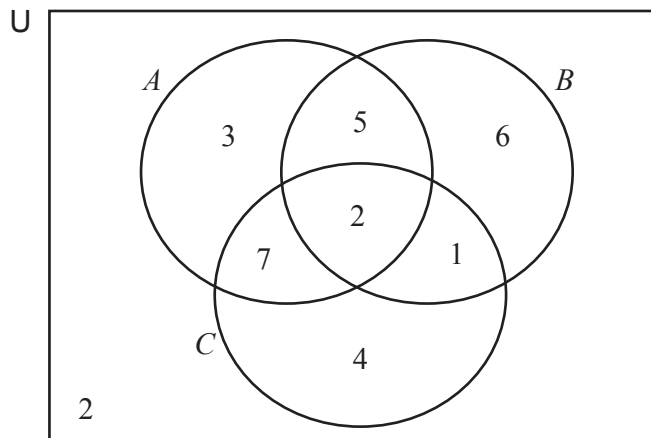
[1]

(b) Describe the shaded area using set notation.



..... [1]

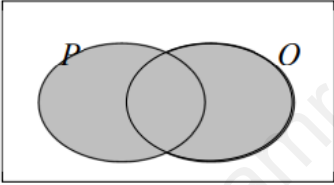
(c) The Venn diagram shows the number of elements in each subset.



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

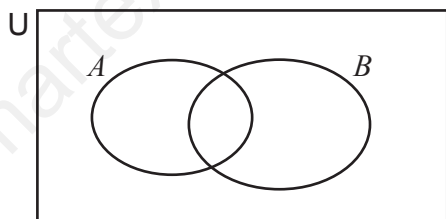
..... [1]

MARK SCHEME:

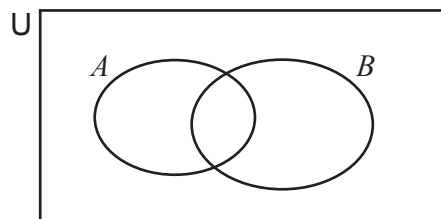
(a)		1	
(b)	$R' \cap S$ or	1	
(c)	7 only	1	

4

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



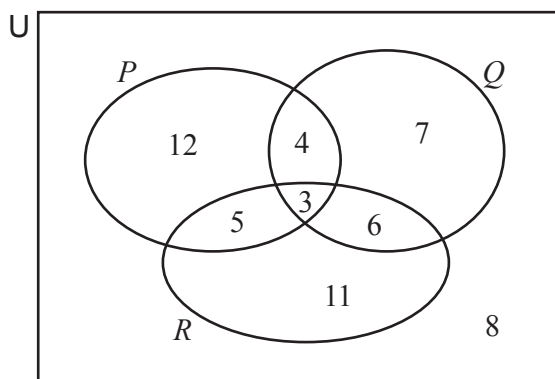
$A \cup B$



$(A \cap B)'$

[2]

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



Find.

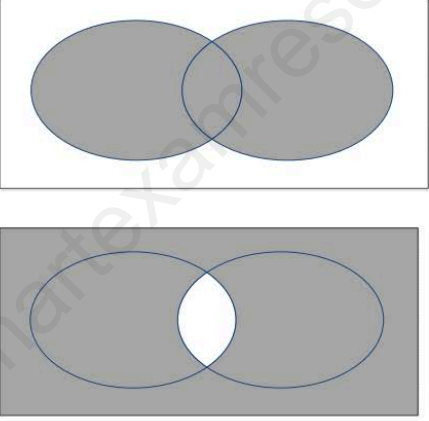
(i) $n(P \cup (Q \cap R))$

..... [1]

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

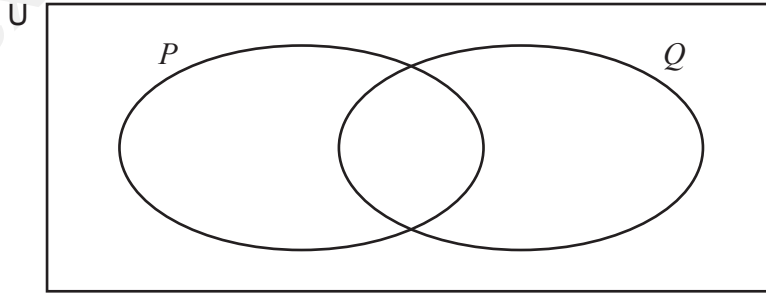
..... [1]

MARK SCHEME:

(a)		2	B1 for each
(b)(i)	30	1	
(b)(ii)	23	1	

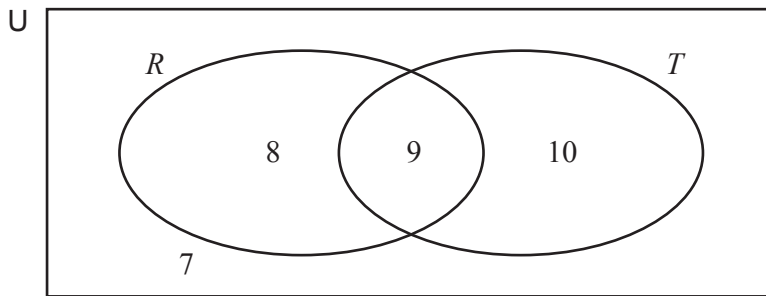
5

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



[1]

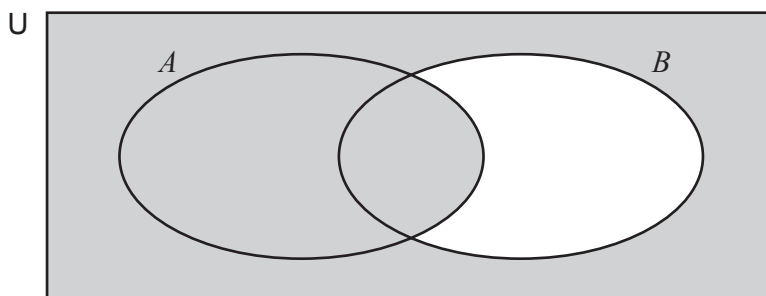
(b) The Venn diagram shows the number of elements in each region.



Find $n(R \cap T')$.

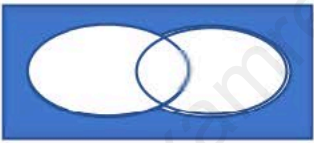
..... [1]

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

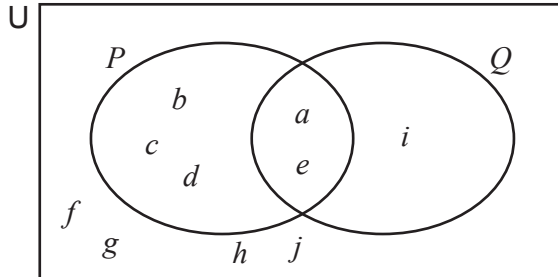


..... [1]

MARK SCHEME:

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

6



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

Complete each statement.

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

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

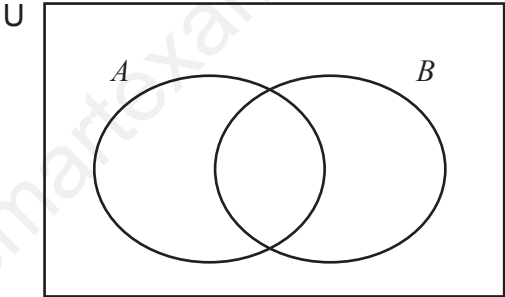
(c) $n(P' \cup Q) = \dots$ [1]

MARK SCHEME:

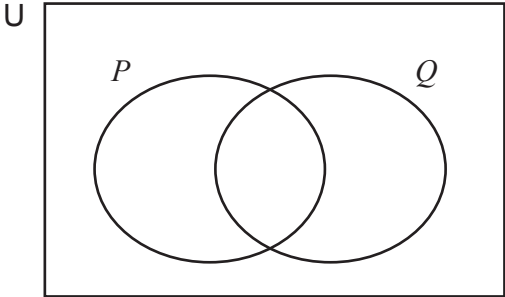
(a)	f, g, h, j	1	
(b)	\cap	1	
(c)	7	1	

7

On the Venn diagrams, shade the given subsets.



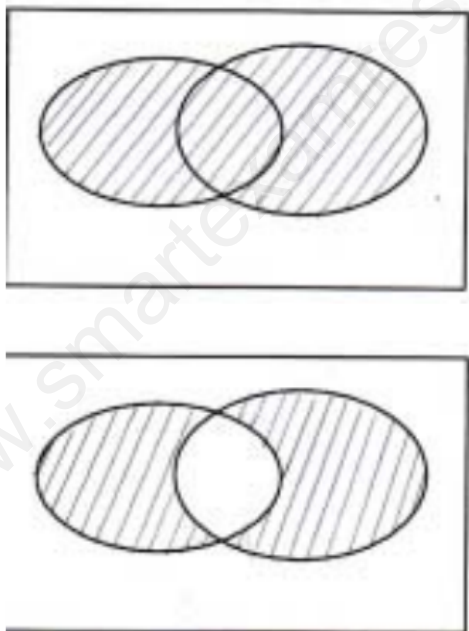
$A \cup B$



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

[2]

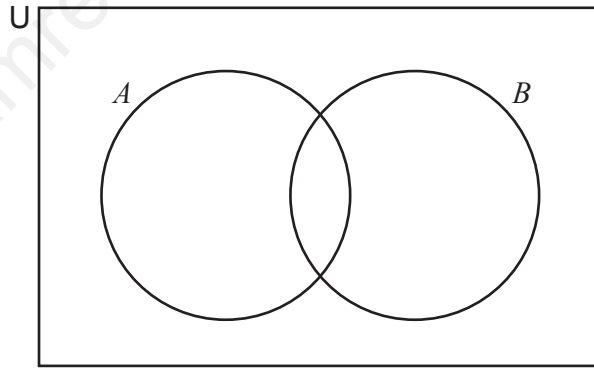
MARK SCHEME:

<p>Correct shading</p>  <p>The image contains two Venn diagrams, each enclosed in a rectangular box. The top diagram shows two overlapping circles. Both circles are shaded with diagonal lines. The bottom diagram shows two overlapping circles. Both circles are shaded with diagonal lines, and the intersection area between them is also shaded with diagonal lines.</p>	<p>2 B1 for each</p>
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8

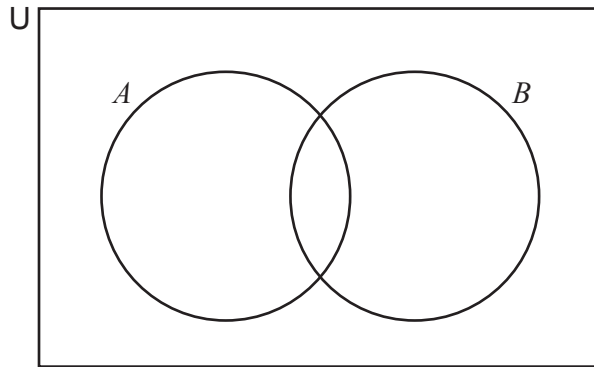
Shade the given region on the Venn diagram.

(a) $A' \cap B'$



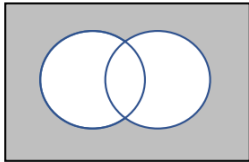
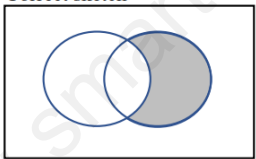
[1]

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



[1]

MARK SCHEME:

(a)	Correct sketch 	1	
(b)	Correct sketch 	1	