

# Sets & Venn Diagrams

## Difficulty: Easy

### Question Paper 2

Level	IGCSE
Subject	Maths (0580/0980)
Exam Board	CIE
Topic	Number
Sub-Topic	Sets & Venn Diagrams
Paper	Paper 2
Difficulty	Easy
Booklet	Question Paper 2

**Time allowed:** 30 minutes

**Score:** /23

**Percentage:** /100

#### Grade Boundaries:

##### CIE IGCSE Maths (0580)

A*	A	B	C	D	E
>88%	76%	63%	51%	40%	30%

##### CIE IGCSE Maths (0980)

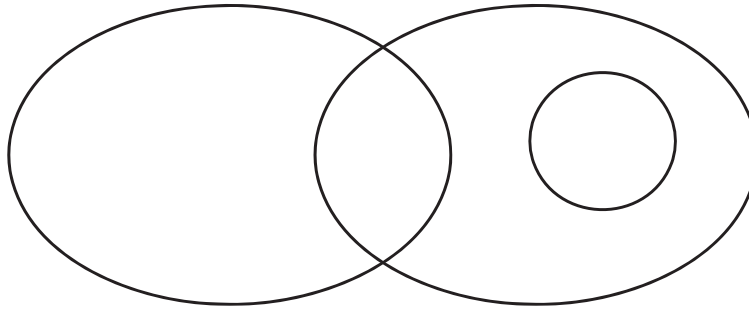
9	8	7	6	5	4	3
>94%	85%	77%	67%	57%	47%	35%

## Question 1

$Q = \{2, 4, 6, 8, 10\}$  and  $R = \{5, 10, 15, 20\}$ .

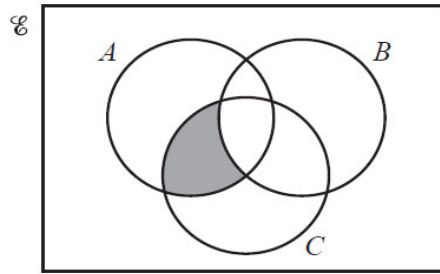
$15 \in P$ ,  $n(P) = 1$  and  $P \cap Q = \emptyset$ .

Label each set and complete the Venn diagram to show this information.



[3]

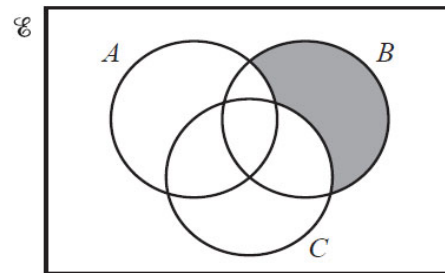
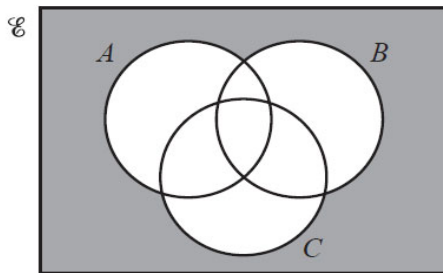
## Question 2



The shaded area in the diagram shows the set  $(A \cap C) \cap B'$ .

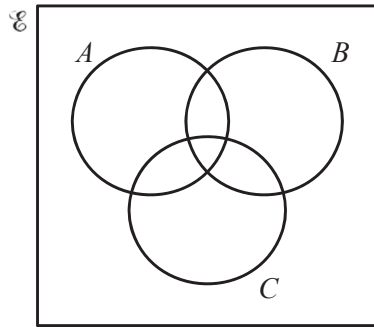
[2]

Write down the set shown by the shaded area in each diagram below.

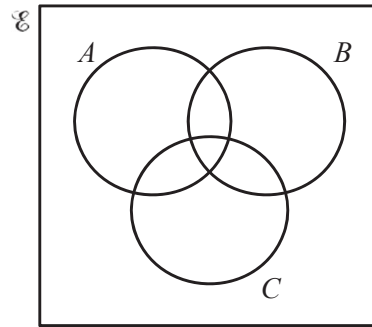


### Question 3

Shade the required regions in the Venn diagrams below.



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

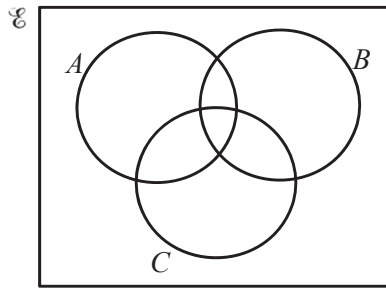


$$(A \cap B) \cup C$$

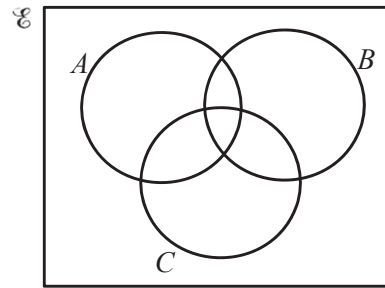
[2]

### Question 4

Shade the region required in each Venn Diagram.



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



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

[2]

### Question 5

$$\mathcal{E} = \{1, 2, 3, 4, 5, 6, 7, 9, 11, 16\}$$

$$P = \{2, 3, 5, 7, 11\}$$

$$S = \{1, 4, 9, 16\}$$

$$M = \{3, 6, 9\}$$

(a) Draw a Venn diagram to show this information.

[2]

(b) Write down the value of  $n(M' \cap P)$ .

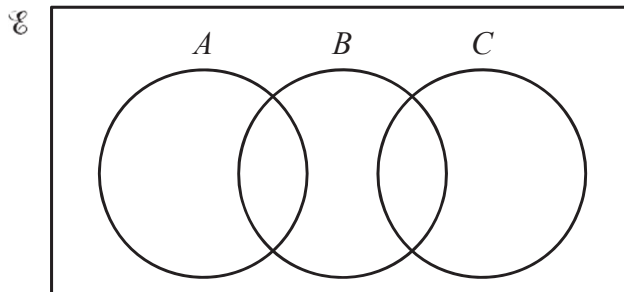
[1]

## Question 6

On the Venn diagrams shade the regions

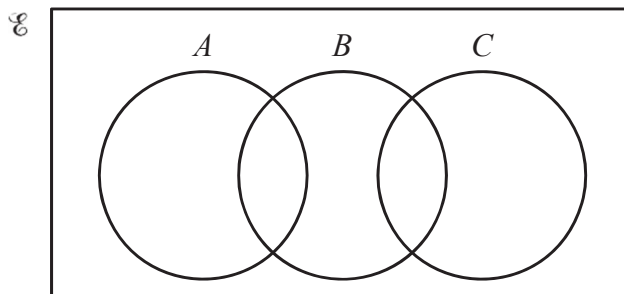
(a)  $A' \cap C'$ ,

[1]



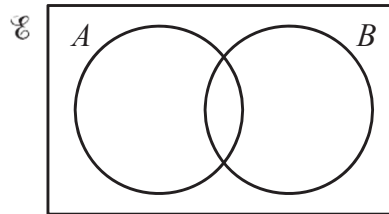
(b)  $(A \cup C) \cap B$ .

[1]



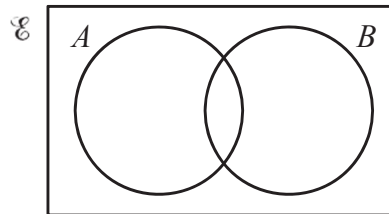
## Question 7

(a) Shade the region  $A \cap B$ .



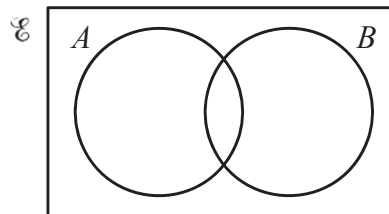
[1]

(b) Shade the region  $(A \cup B)'$ .



[1]

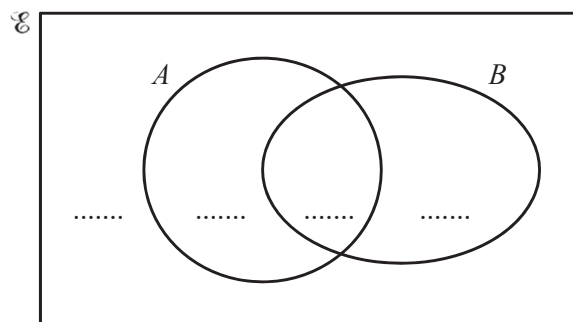
(c) Shade the complement of set  $B$ .



[1]

## Question 8

$n(\mathcal{E}) = 21$ ,  $n(A \cup B) = 19$ ,  $n(A \cap B') = 8$  and  $n(A) = 12$ .  
Complete the Venn diagram to show this information.



[3]

## Question 9

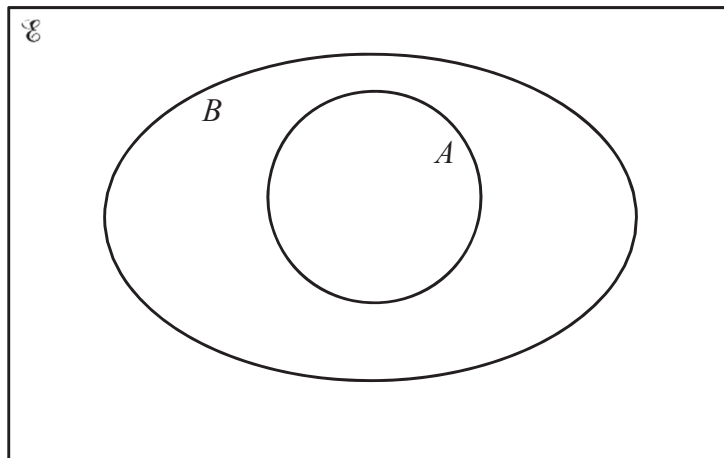
$$\mathcal{E} = \{40, 41, 42, 43, 44, 45, 46, 47, 48, 49\}$$

$$A = \{\text{prime numbers}\}$$

$$B = \{\text{odd numbers}\}$$

(a) Place the 10 numbers in the correct places on the Venn diagram.

[2]



(b) State the value of  $n(B \cap A')$ .

[1]