

Sets & Venn Diagrams

Difficulty: Easy

Question Paper 1

Level	IGCSE
Subject	Maths (0580/0980)
Exam Board	CIE
Topic	Number
Sub-Topic	Sets & Venn Diagrams
Paper	Paper 2
Difficulty	Easy
Booklet	Question Paper 1

Time allowed: 34 minutes

Score: /26

Percentage: /100

Grade Boundaries:

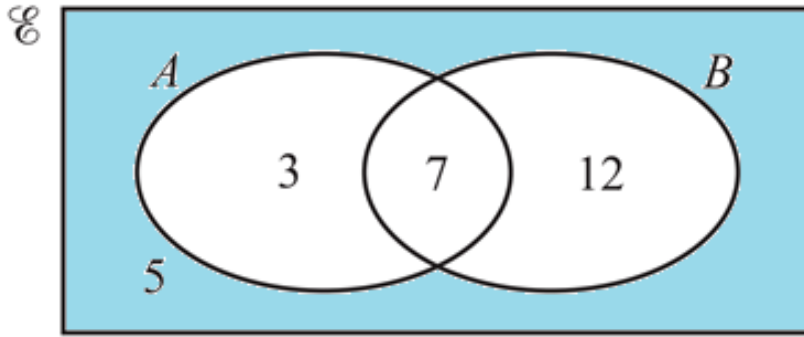
CIE IGCSE Maths (0580)

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



The Venn diagram shows the numbers of elements in each region.

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

[1]

(b) An element is chosen at random.

Find the probability that this element is in set B .

[1]

(c) An element is chosen at random from set A .

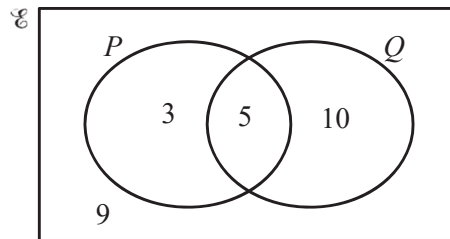
Find the probability that this element is also a member of set B .

[1]

(d) On the Venn diagram, shade the region $(A \cup B)'$.

[1]

Question 2



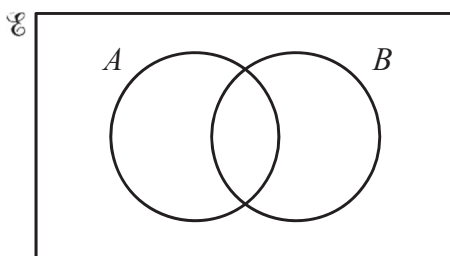
The Venn diagram shows the number of elements in each set.

(a) Find $n(P' \cap Q)$. [1]

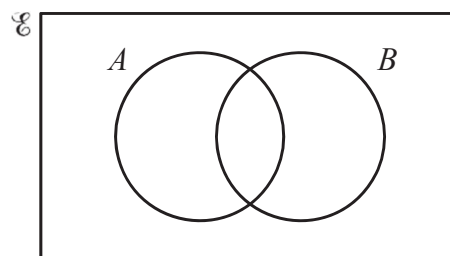
(b) Complete the statement $n(\dots\dots\dots) = 17$. [1]

Question 3

Shade the region required in each Venn diagram. [2]



$(A \cup B)'$



$A' \cap B$

Question 4

The lights and brakes of 30 bicycles are tested.
The table shows the results.

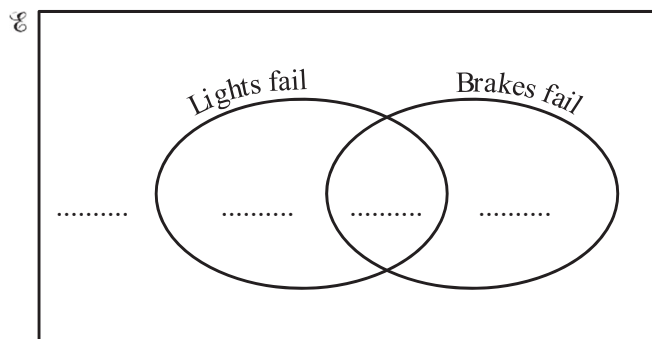
	Lights	Brakes
Fail test	3	9
Pass test	27	21

The lights and brakes both failed on one bicycle only.

$\mathcal{E} = \{30 \text{ bicycles}\}$

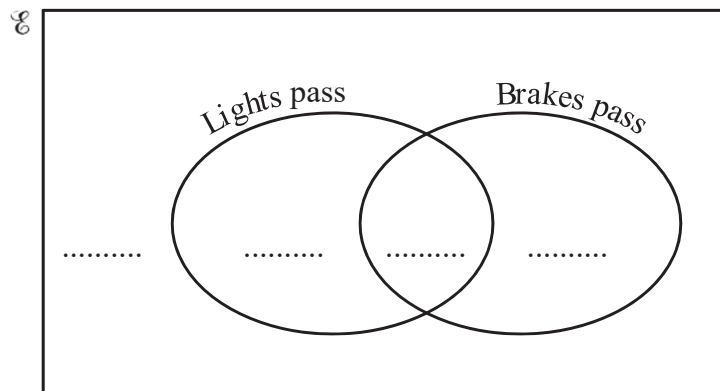
Complete the Venn diagrams.

(a)



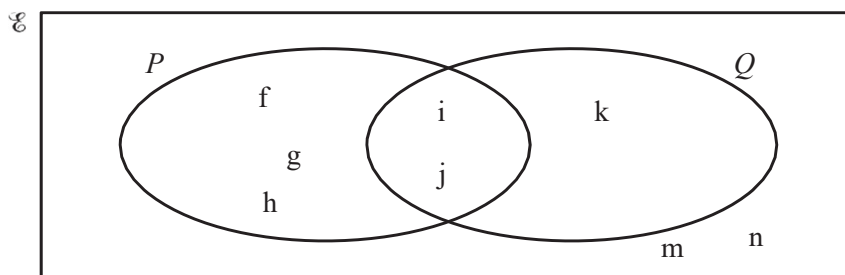
[2]

(b)



[2]

Question 5



(a) Use the information in the Venn diagram to complete the following.

(i) $P \cap Q =$ [1]

(ii) $P' \cup Q =$ [1]

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

(b) A letter is chosen at random from the set Q .

Find the probability that it is also in the set P .

Find the probability that it is also in the set P . [1]

(c) On the Venn diagram shade the region $P' \cap Q$. [1]

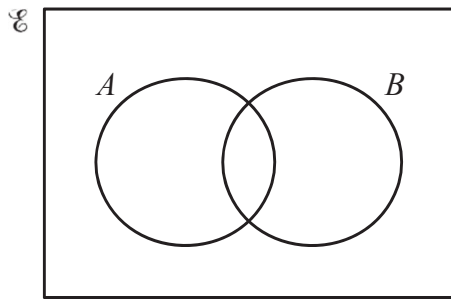
(d) Use a set notation symbol to complete the statement.

$\{f, g, h\}$ P [1]

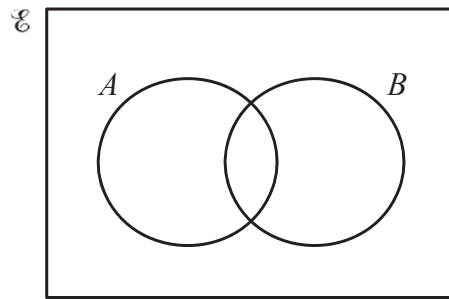
Question 6

Shade the required region on each Venn diagram.

[2]



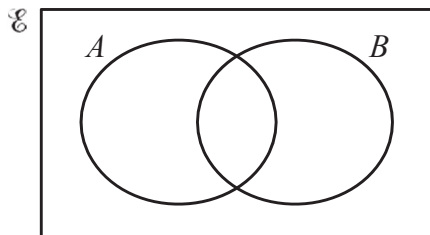
$$A' \cup B$$



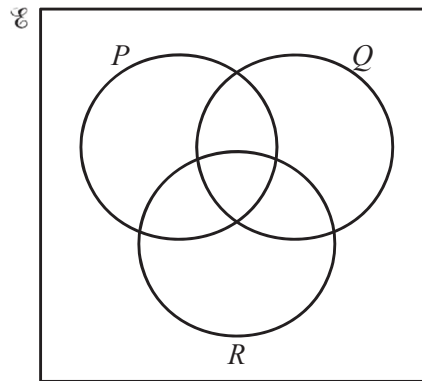
$$A' \cap B'$$

Question 7

Shade the required region in each of the Venn diagrams.



$$A'$$



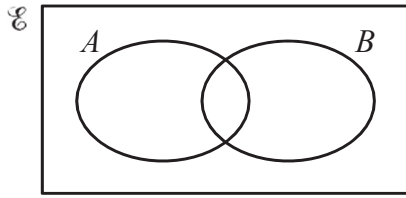
$$(P \cap R) \cup Q$$

[2]

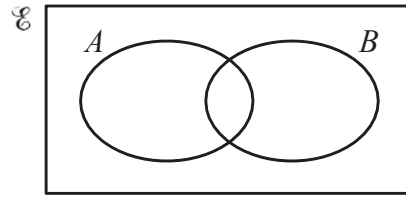
Question 8

Shade the required region on each Venn diagram.

[2]



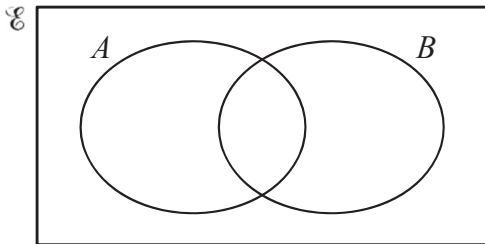
$$A \cup B'$$



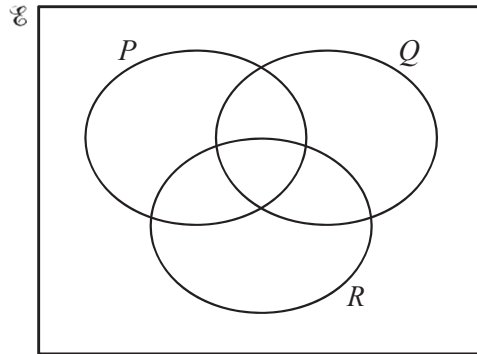
$$(A \cap B)'$$

Question 9

Shade the required region on each Venn diagram.



$$A \cap B'$$



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

[2]