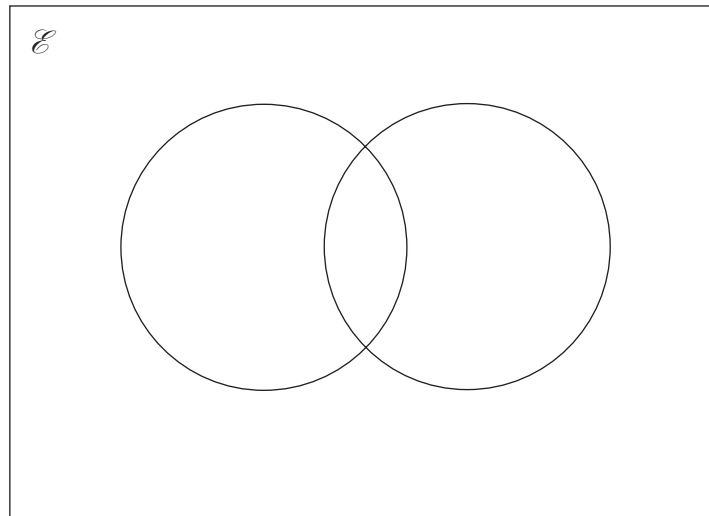


- 1 $\mathcal{E} = \{\text{odd numbers less than 30}\}$
 $A = \{3, 9, 15, 21, 27\}$
 $B = \{5, 15, 25\}$

(a) Complete the Venn diagram to represent this information.



(4)

A number is chosen at random from the universal set, \mathcal{E} .

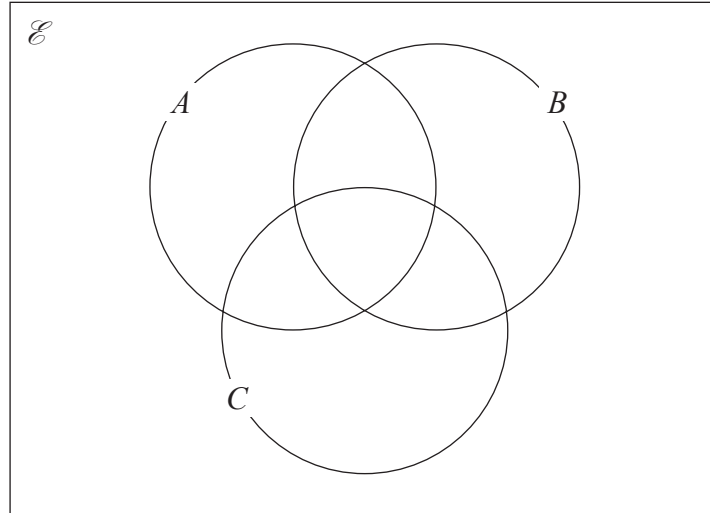
(b) What is the probability that the number is in the set $A \cup B$?

.....
(2)

(Total for Question 1 is 6 marks)

- 2 $\mathcal{E} = \{\text{even numbers between 1 and 25}\}$
 $A = \{2, 8, 10, 14\}$
 $B = \{6, 8, 20\}$
 $C = \{8, 18, 20, 22\}$

(a) Complete the Venn diagram for this information.



(4)

A number is chosen at random from \mathcal{E} .

(b) Find the probability that the number is a member of $A \cap B$.

.....
(2)

(Total for Question 2 is 6 marks)

3 $A = \{\text{multiples of 5 between 14 and 26}\}$

$B = \{\text{odd numbers between 14 and 26}\}$

(a) List the members of $A \cup B$

.....
(2)

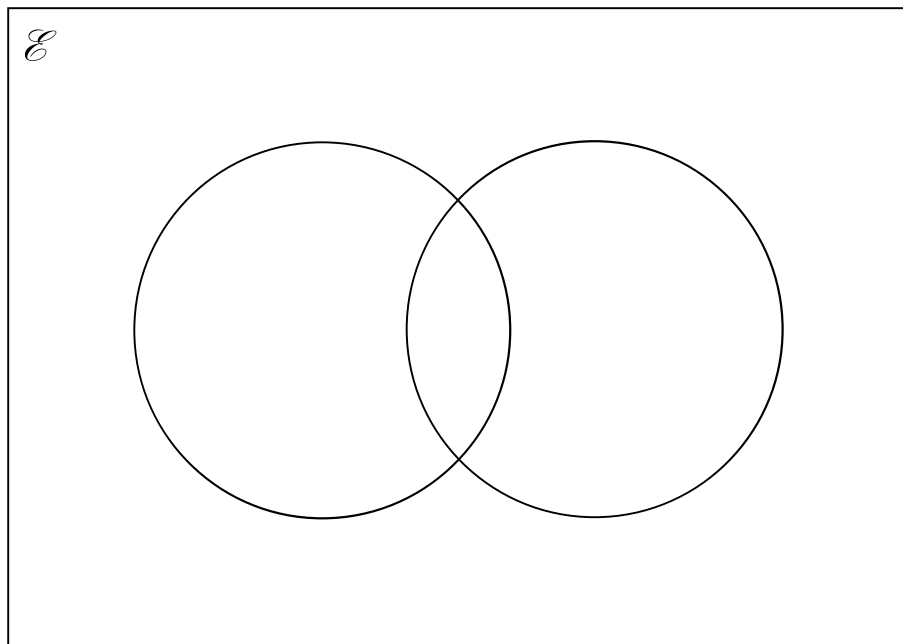
(b) Describe the members of $A \cap B$

.....
(1)

(Total for Question 3 is 3 marks)

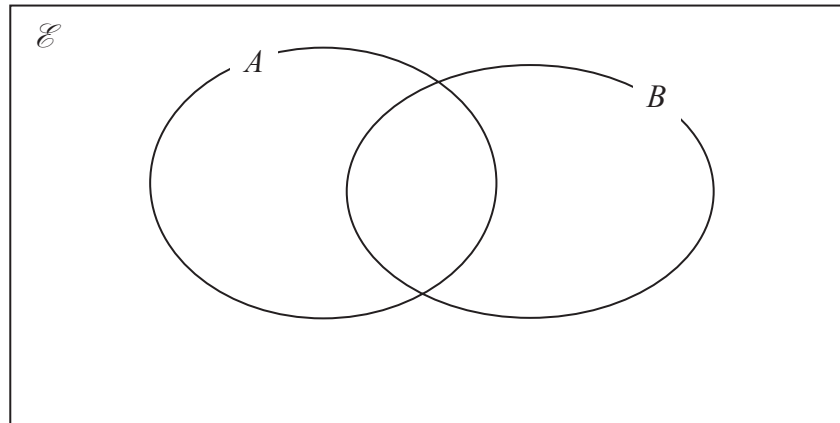
- 4 $\mathcal{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13\}$
 $A = \{\text{multiples of 3}\}$
 $B = \{\text{even numbers}\}$

Complete the Venn diagram for this information.



(Total for Question 4 is 4 marks)

- 5 $\mathcal{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$
 $A = \{1, 5, 6, 8, 9\}$
 $B = \{2, 6, 9\}$



- (a) Complete the Venn diagram to represent this information.

(3)

A number is chosen at random from the universal set \mathcal{E} .

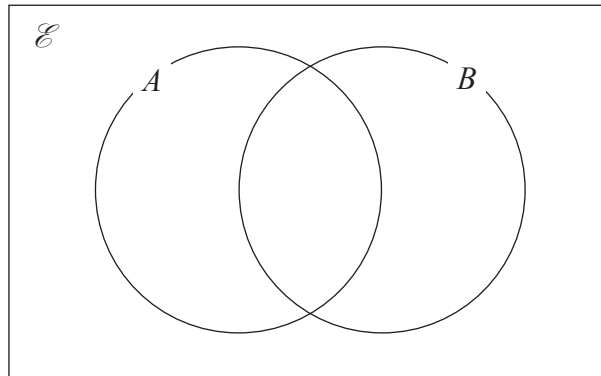
- (b) Find the probability that the number is in the set $A \cap B$

.....
(2)

(Total for Question 5 is 5 marks)

- 6 $\mathcal{E} = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$
 $A = \{\text{even numbers}\}$
 $B = \{\text{factors of } 10\}$

(a) Complete the Venn diagram for this information.



(3)

A number is chosen at random from the universal set, \mathcal{E}

(b) Find the probability that this number is in the set $A \cap B$

.....
(2)

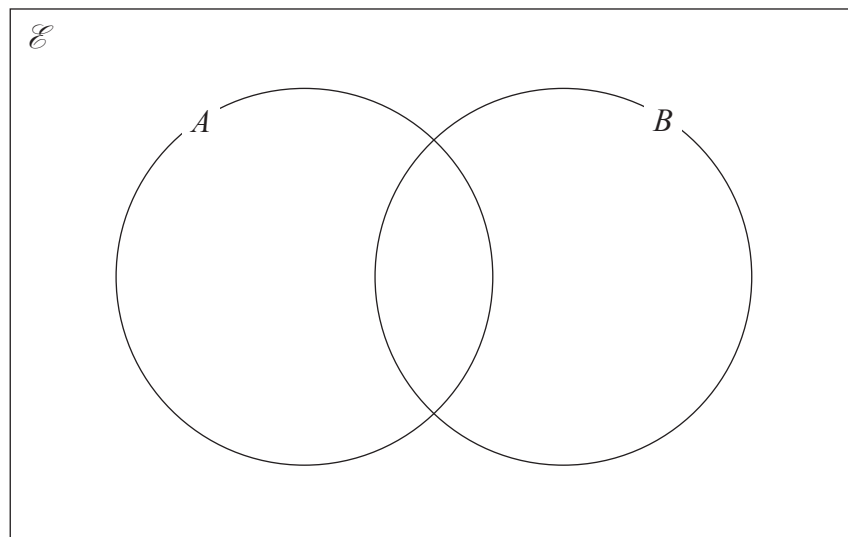
(Total for Question 6 is 5 marks)

7 $\mathcal{E} = \{\text{even numbers less than 19}\}$

$A = \{6, 12, 18\}$

$B = \{2, 6, 14, 18\}$

Complete the Venn diagram for this information.



(Total for Question 7 is 3 marks)