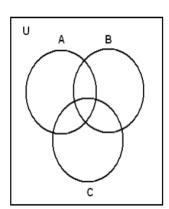
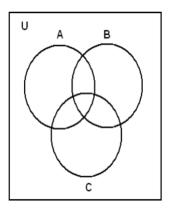
Question 1

Shade in the region below

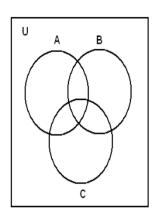
 $(A \cup B)' \cap C$



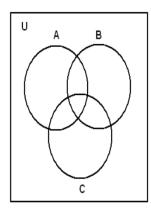
 $B' \cap (A \cap C)$



 $A' - (B \cup C)$

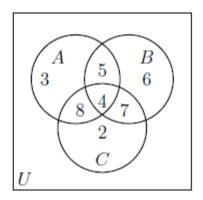


 $(A \cap B) \cup C$



Question 2

Using the Venn diagram below, list the element of each of these sets.



(a) $A \cap B$

(b) $B \cup C$

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

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

Question 3

List the elements in each set.

- (a) $\{x \mid x \text{ is an even natural number less than } 12\}$
- (b) $\{x \mid x \text{ is a natural number greater than } 8\}$
- (c) $\{x \mid x \text{ is an odd natural number 2 and 13}\}$
- (d) $\{x \mid x \text{ is an prime number less than } 18\}$

Question 4

Using the sets D, E, and F, list the elements in each set. If the set is empty write \emptyset .

$$D = \{3, 5, 7\}$$

$$E = \{2, 4, 6, 8\}$$

$$D = \{3, 5, 7\}$$
 $E = \{2, 4, 6, 8\}$ $F = \{1, 2, 3, 4, 5\}$

(a)
$$D \cap E$$

(c)
$$(D \cap E) \cup (F \cap E)$$

(b)
$$(D \cup E) \cap F$$

(c)
$$(D \cap E) \cup (F \cap E)$$

(d) $(D \cup E) \cap (D \cup F)$

Question 5

(a) The sets A, B, and C are as follows:

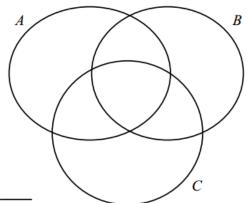
$$A = \{2, 3, 4, 5, 6\}, B = \{2, 4, 6, 8, 10\}, \text{ and } C = \{1, 4, 8, 12, 14\}.$$

- (i) Complete the Venn diagram.
- (ii) List the elements of each of the following sets:

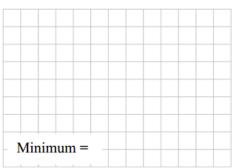
$$A \cap B =$$

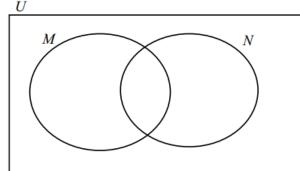
$$B\setminus (A\cap C)=$$



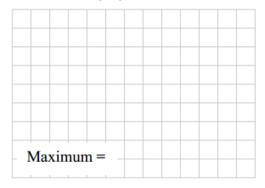


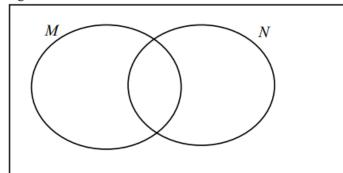
- (iii) Write down a null set, in terms of A, B, and C.
- (b) In a table quiz, 100 questions were asked. Team M answered 72 questions correctly. Team N answered 38 questions correctly.
 - (i) Find, with the aid of the Venn diagram, the minimum number of questions answered correctly by both teams.





(ii) Find, with the aid of the Venn diagram, the maximum number of questions answered correctly by both teams.





Shade the Named Region

