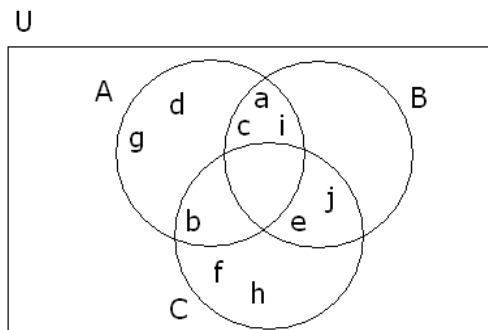


- Let  $A = \{2, 3, 5, 6, 8, 9, 10\}$  and  $B = \{1, 3, 4, 8, 10\}$ . Label the following statements as true or false.
  - $2 \in A$
  - $2 \in B$
  - $3 \in A \cap B$
  - $9 \in A \cup B$
- List all subsets of  $M = \{1, 2, 3\}$ .
- Let  $A = \{2, 3, 5, 6, 8, 9, 10\}$  and  $B = \{1, 3, 4, 8, 10\}$ .
  - Find  $A \cap B$ .
  - Find  $A \cup B$ .
  - List all 3-element subsets of  $B$ .
  - How many proper subsets does  $B$  have? (You don't have to list them.)
  - How many subsets does  $A$  have? (You don't have to list them.)
- How many different 3-digit numbers can be formed using the digits 1, 2, and 3, without repetition? List all these numbers.
- How many different 4-digit numbers can be formed using the digits 1, 2, 3, and 4, without repetition? List all these numbers.
- Consider the picture shown below. Find each of the following.



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