Events
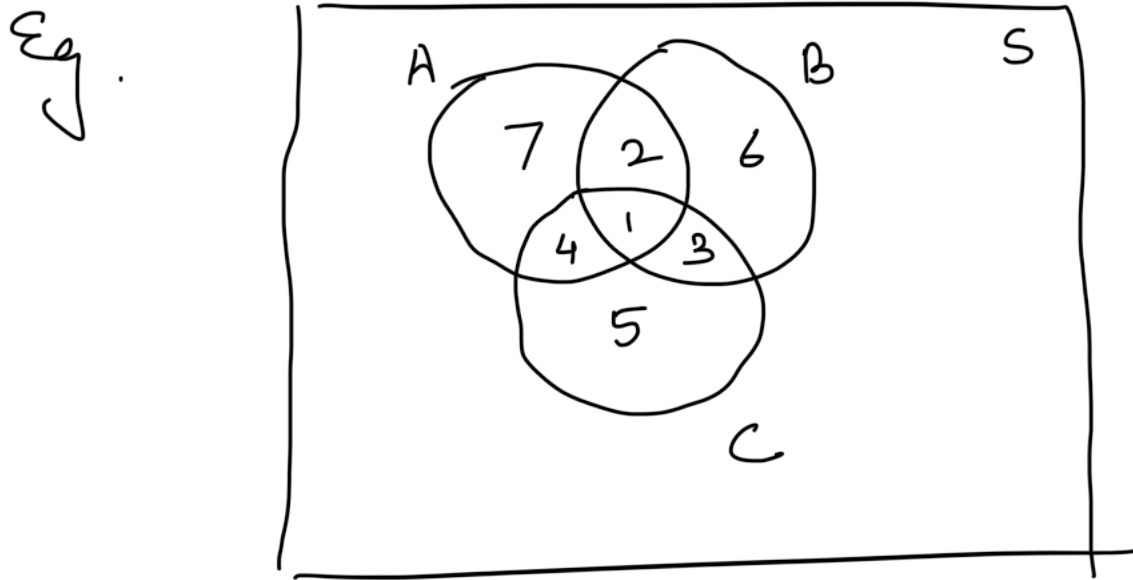
- An event is a subset of sample space. For each event we assign a collec^n of sample points, which constitute a subset of sample space. That particular subset represents all of the elements for which the event is true.

- Event may be a subset that has entire space S or a subset of S or a null set (ϕ).

- A compliment of event A w.r.t S is the subset of all elements of S that are not in A. The compliment of A is denoted by A'.

- The intersec^n of 2 events A & B is denoted by $\boxed{A \wedge B}$. It is the event that contains all the elements that are common to both A & B.

- For some statistical experiments, by no means we can define 2 events A & B that can occur simultaneously. Two such events A & B are mutually excluse or disjoint events. If A∧B = ϕ, A & B have no common elements.

- The union of 2 events is denoted by $\boxed{A \cup B}$. It is the event that contains all the elements that belong to A or B or both.
- The graphical tool that helps to depict relationship btw. elements & the corresponding sample space, graphically are c/d Venn diagrams.

Eg.

$A \cup C = $ Reg. 1, 2, 3, 4, 5, 7

$B' \cap A = $ Reg. 4 & 7

$A \cap B \cap C = $ Reg. 1

$(A \cup B) \cap C' = $ Reg. 2, 6, 7