

8.3 –C- Operations between events

Ex 1: Roll a fair die once.

$$\Omega = \{1,2,3,4,5,6\}$$

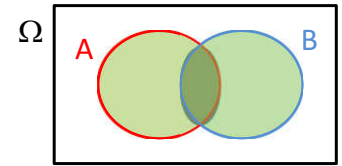
Consider:

Event A: rolling an even number

Event B: rolling a number less than 4

1

The 2 events can be represented by the Venn Diagram here



1) **A Intersection B:** $A \cap B$ is the event when A and B both occur.

2) **A Union B:** $A \cup B$ is the event when A or B occur.

3) **Complement of A:** \bar{A} or A' (read A bar or A prime, and means contrary of A): is the event when anything except A could occur.

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So in Ex 1: Roll a fair die once.

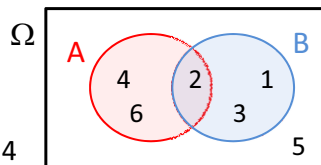
$$\Omega = \{1,2,3,4,5,6\}$$

Event A: rolling even #

$$A = \{2,4,6\}$$

Event B: rolling a # less than 4

$$B = \{1,2,3\}$$



$$\bar{A} =$$

$$\bar{B} =$$

$$A \cap B =$$

$$A \cup B =$$

$$A \cap \bar{B} =$$

$$\bar{A} \cap B =$$

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Practice:
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