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

A: an even nr. appears

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

B: a nr. less than 4 appears

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

$A_i = \{i\}$, $i = \overline{1,6}$ - elementary events

$A = A_2 \cup A_4 \cup A_6$

$A \subseteq \Omega$ - random event

- certain event, impossible event
- contrary events
- compatible / incompatible events
- disjoint events
- event implied by other event
- exhaustive events

$a+b>8$, $b=3$

$A: a+b>8$

$B: b=3$

$$P(A|B) = \frac{P(A \cap B)}{P(B)} = \frac{\frac{1}{36}}{\frac{6}{36}} = \frac{1}{6}$$

$B = \{(1,3), (2,3), (3,3), (4,3), (5,3), (6,3)\}$

$A = \{(3,6), (4,5), (4,6), (5,4), (5,5), (5,6), (6,3), (6,4), (6,5), (6,6)\}$

$A \cap B = \{(6,3)\}$

$P(A \cap B) = \frac{1}{36}$, $P(B) = \frac{6}{36}$