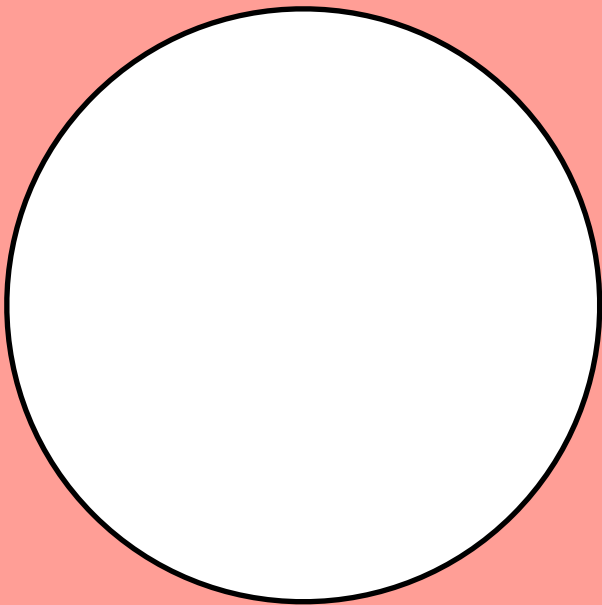


frontier properties

A

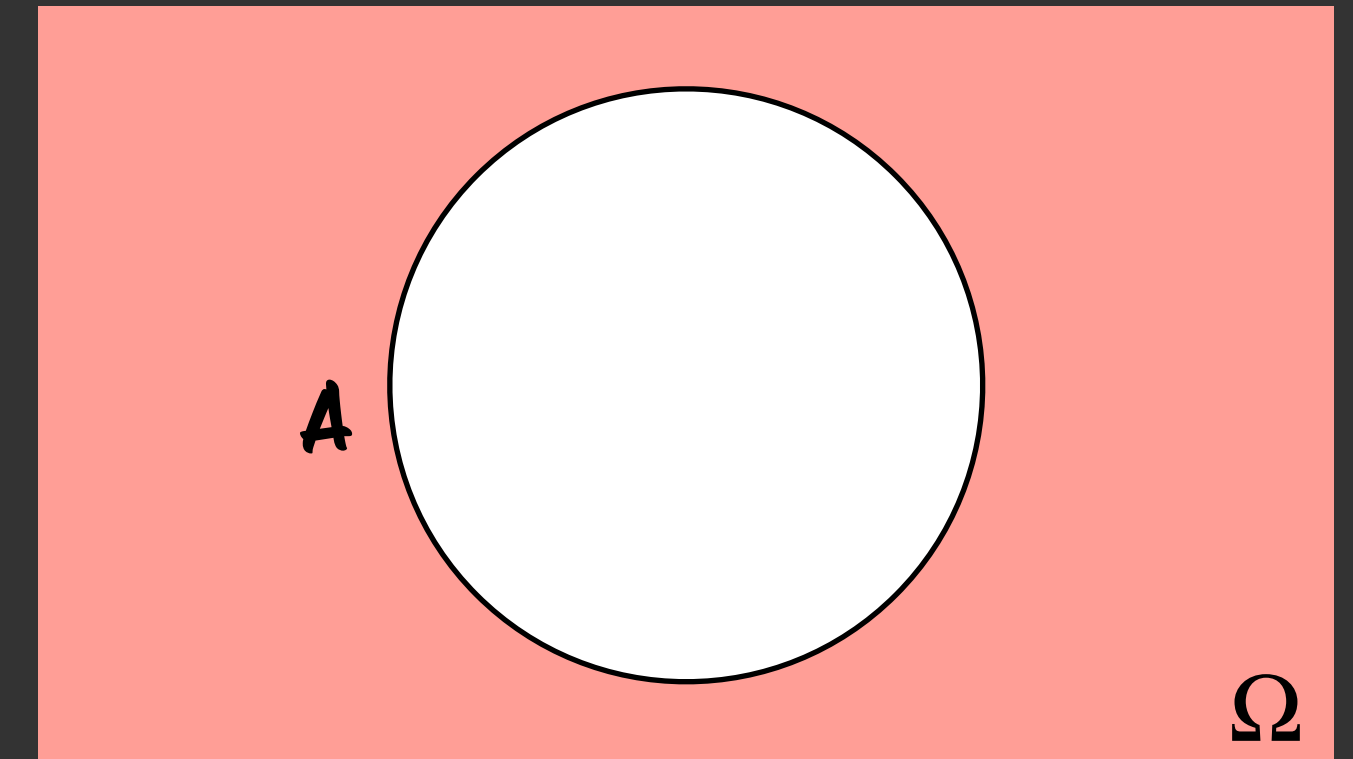


Ω

further properties

- $P(A \cup \bar{A}) = P(A) + P(\bar{A}) = 1 \implies P(\bar{A}) = 1 - P(A)$

(this is also referred to as the complement rule coming up shortly...)



- $0 \leq P(A) \leq 1$ for any event A

Directly follows from axiom (1) and (2).

Also directly evident from set theory:

$$\emptyset \subset A \subset \Omega \text{ for any event } A \implies P(\emptyset) \leq P(A) \leq P(\Omega) \implies 0 \leq P(A) \leq 1$$

probability of an event

probability