Complementary events

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Find $P(\text{not } 1)$ for a fair standard die. [2 marks]

Five of six equally likely outcomes are not 1.

Answer: $\frac{5}{6}$.

2. If $P(\text{rain}) = 0.35$, find $P(\text{no rain})$. [2 marks]

$1 - 0.35 = 0.65$.

Answer: 0.65.

3. A bag has 4 red,3 blue,5 green tokens. Find $P(\text{not green})$ for a random draw. [2 marks]

There are 12 tokens and 7 are not green.

Answer: $\frac{7}{12}$.

4. An event has probability 72%. Find the complement probability. [2 marks]

$100\% - 72\% = 28\%$.

Answer: 28%.

5. Why are even and odd outcomes complements on a standard die? [3 marks]

Every die outcome belongs to exactly one of the two sets.

Answer: They do not overlap and together cover all six outcomes.

6. Find the complement probability of an impossible event. [1 mark]

$1 - 0 = 1$.

Answer: 1.