

Quiz 1

Reading: Axioms

Quiz Date: Wed, June 13

Problem 1

A fair die is cast twice.

- a) Find Ω .
- b) Let A be the event that the first number is larger than 6. Find A and $P(A)$.
- c) Let B be the event that the sum is 5. Find B and $P(B)$.

Solution

- a) $\Omega = \{(a, b) : a \in \mathbb{N}, b \in \mathbb{N}, 1 \leq a \leq 6, 1 \leq b \leq 6\}$
- b) $A = \emptyset$ and $P(A) = |A|/|\Omega| = 0$.
- c) $P(B) = |B|/|\Omega| = 4/36 = 1/9$ since $B = \{(1, 4), (2, 3), (3, 2), (4, 1)\}$.