Conditions

Paul is playing a game at the school carnival. He rolls two fair-numbered cubes numbered from 1 to 6. Paul wins a prize if both cubes land on 4. What is the probability Paul will win a prize?

Solution

This is a product of 2 probabilities – of the event when 1 cube is landed on 4.

The last probability can be found as rate between all favorable outcomes for this event (it's only one, where 4 is landed) to all possible outcomes (1,2,3,4,5,6). So, this probability is 1/6.

The probability of 2 cubes are landed both on 4 is 1/6 * 1/6 = 1/36.