

## Problem 2

How many outcome sequences are possible when a die is rolled four times, where we say, for instance, that the outcome is 3, 4, 3, 1 if the first roll landed on 3, the second on 4, the third on 3, and the fourth on 1?

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### Solution

There are 6 possible outcomes from rolling a die (1-6). By the principle of counting, there are

$$6 \times 6 \times 6 \times 6 = 1296$$

different outcome sequences from rolling a die four times.