

## Conditions

If I roll 5 dice, what are the odds of getting AT LEAST 3 even numbers?

If its not too much trouble I'd love to know how you arrived at the answer, thanks.

## Solution

As we know, the standard dice have 3 even and 3 odd numbers.

Let's calculate how many favorable outcomes for our event: It's all possible variants of taking 3 or 4 or 5 dice with one of 3 lucky positions:

$$3 \cdot 3 \cdot 3 \cdot 6 \cdot 6$$

And the all possible outcomes are:

$$6 \cdot 6 \cdot 6 \cdot 6 \cdot 6$$

The probability is the rate of favorable and all outcomes:

$$P = \frac{3 \cdot 3 \cdot 3 \cdot 6 \cdot 6}{6 \cdot 6 \cdot 6 \cdot 6 \cdot 6} = \frac{1}{8}$$