Answer on Question #54412 – Math – Statistics and Probability

Isabella rolled a numbered cube 300 times. How many times will Isabella expect to roll an even number?

Solution

There are 6 equiprobable possibilities to roll a number. Then Isabella rolled each number with probability equal to $\dfrac{1}{6}$.

Since the numbers 2, 4, 6 are even and numbers 1, 3, 5 are odd, then the probability of the event "the number at the top of cube is even" is equal to $\dfrac{1}{6} + \dfrac{1}{6} + \dfrac{1}{6} = \dfrac{1}{2}$.

Thus, Isabella expects to roll an even number $\dfrac{1}{2} \cdot 300 = 150$ times.

Answer: 150 times.