

Answer on Question #55831 – Math – Statistics and Probability

A die has four of its faces coloured white and the remaining two coloured black. What is the probability that when the die is thrown two consecutive times, the top face will be white in both cases?

1/3

4/9

9/20

1/3

Solution

The probability that when the die is thrown the top face will be white is

$$P(W) = \frac{4}{6} = \frac{2}{3}$$

Thus, the probability that when the die is thrown two consecutive times, the top face will be white in both cases is

$$P(W, W) = P(W) \cdot P(W) = \frac{2}{3} \cdot \frac{2}{3} = \frac{4}{9}$$

Answer: $\frac{4}{9}$.