Answer on Question #47199 – Math – Statistics and Probability

When a die is thrown, what is the probability that the number is greater than 1, given that it is odd?

1/5

3/5

4/5

2/3

Solution

When a die is thrown, 6 outcomes are possible: 1, 2, 3, 4, 5 or 6.

By definition of conditional probability, the probability that the number is greater than 1, given that it is odd, is

$$P(greater\ than\ 1|odd\ number\ ) = \frac{P(greater\ than\ 1 \cap odd\ number\ )}{P(odd\ number\ )} = \frac{P(3\ or\ 5)}{P(1\ or\ 3\ or\ 5)} = \frac{\frac{2}{6}}{\frac{3}{6}} = \frac{2}{3}.$$

Answer: $\frac{2}{3}$.