

Question #15171 In throwing a pair of dice find the probability of getting an odd number on the first die and a total of 7 on both dies

Solution. The set of elementary events that corresponds to the throwing of 2 dies is $\{(i, j) | 1 \leq i, j \leq 6\}$. We are interested in the probability of the event $A = \{(i, j) | i + j = 7, i \text{ is odd}, 1 \leq i, j \leq 6\}$. So $P(A) = P(\{(i, j) | i + j = 7, i = 1, 1 \leq i, j \leq 6\}) + P(\{(i, j) | i + j = 7, i = 3, 1 \leq i, j \leq 6\}) + P(\{(i, j) | i + j = 7, i = 5, 1 \leq i, j \leq 6\}) = \frac{3}{36} = 1/12$, due to each of the event $\{(i, j) | i + j = 7, i = i_0, 1 \leq i, j \leq 6\}$ has probability $1/36$.

Answer $1/12$.