

Answer on Question #46384 – Math – Statistics and Probability

Let two dice be thrown. What is the probability that the sum on the dice is greater than or equal to 9?

Solution

Outcomes when rolling two dice:

Outcomes	The sum on the dice	Total Probability
(1; 1)	2	1/36
(1; 2), (2;1)	3	2/36
(1; 3), (3; 1), (2;2)	4	3/36
(1;4), (4;1), (2; 3), (3;2)	5	4/36
(1;5), (5;1), (2;4), (4;2), (3;3)	6	5/36
(1;6), (6;1), (2;5), (5;2), (3;4), (4;3)	7	6/36
(4;4), (3;5), (5;3), (2;6), (6;2)	8	5/36
(4;5), (5;4), (3;6), (6;3)	9	4/36
(5;5), (4;6), (6;4)	10	3/36
(5;6), (6;5)	11	2/36
(6;6)	12	1/36

So, the probability of rolling 9 or greater is $4/36+3/36+2/36+1/36 = 10/36 = 5/18$.