

Observe that the experiment has a total of  $6 \times 6 = 36$  outcomes. Consider 3 cases, namely when sum is 3, 5, respectively 9.

When the sum is 3 observe there are 2 possibilities: (1,2) and (2,1). Consider the case when the sum is 5 and observe there are 4 possibilities: (1,4), (2,3), (3,2), and (4,1). In the case when the sum is 9 there are 4 possibilities: (3,6), (4,5), (5,4), and (6,3).

Hence the probability is

$$\frac{2 + 4 + 4}{36} = \frac{10}{36} = \frac{5}{18}$$

*Any alternative, correct solution earns full credit.*