Please write **_Your name:_** _____

You may leave your answer in terms of sums, products, factorials or binomial coefficients, and fractions. There is NO need to simplify. NO calculators are needed.
....

(1) What is the probability that if we roll 2 dice, the sum is 3?

(2) What is the probability that if we roll 2 dice, the sum is 5?

(3) What is the probability that if we roll 3 dice, the sum is 18?

(More on the back)

(4) If we choose 3 cards out of 52 at random. What is the probability that they are of the same color?

(5) If we choose 3 cards out of 52 at random. What is the probability that their colors are all different?

(6) Suppose we choose 6 balls at random from a box containing 9 red and 8 blue balls. What is the probability that, among these 6 balls, 4 are red and 2 are blue?