Writing out the Sample Space

Definition: Sample Space:

Remember: P(outcome) = # of that outcome / total # of possibilities
Sometimes it is helpful to list all the possible ways that a chance process can turn out.

Puzzle #1: There are 6 x 6 =36 ways for the dice to fall as shown in the figure below:

	1	2	3	4	5	6
1	(1, 1)	(1, 2)	(1, 3)	(1, 4)	(1, 5)	(1, 6)
2	(2, 1)	(2, 2)	(2, 3)	(2, 4)	(2, 5)	(2, 6)
3	(3, 1)	(3, 2)	(3, 3)	(3, 4)	(3, 5)	(3, 6)
4	(4, 1)	(4, 2)	(4, 3)	(4, 4)	(4, 5)	(4, 6)
5	(5, 1)	(5, 2)	(5, 3)	(5, 4)	(5, 5)	(5, 6)
6	(6, 1)	(6, 2)	(6, 3)	(6, 4)	(6, 5)	(6, 6)

What's the probability of rolling two dice and getting a sum of 4?

What's the probability of rolling two dice and getting a sum of 10?

What's the probability of the second die having a value of 4 or greater?

Puzzle #2: You roll two different fair six-sided dice at the same time. One die is colored blue, one is colored red. What is the probability that the blue die lands on 4 or the red die lands on 2?