

	A	B	C	D	E
1	Find expected value and its variance of the random variable with value of sum of				
2	outcomes of two dices when they are rolled simultaneously.				
3					
4					
5	x	Possible Outcome	p(x)	xp(x)	x <sup>2</sup> p(x)
6	2	(1, 1)	0.03	0.06	0.11
7	3	(1, 2), (2, 1)	0.06	0.17	0.50
8	4	(1, 3), (3, 1), (2, 2)	0.08	0.33	1.33
9	5	(1, 4), (4, 1), (2, 3), (3, 2)	0.11	0.56	2.78
10	6	(1, 5), (5, 1), (2, 4), (4, 2), (3, 3)	0.14	0.83	5.00
11	7	(1, 6), (6, 1), (2, 5), (5, 2), (3, 4), (4, 3)	0.17	1.17	8.17
12	8	(2, 6), (6, 2), (3, 5), (5, 3), (4, 4)	0.14	1.11	8.89
13	9	(3, 6), (6, 3), (4, 5), (5, 4)	0.11	1.00	9.00
14	10	(4, 6), (6, 4), (5, 5)	0.08	0.83	8.33
15	11	(5, 6), (6, 5)	0.06	0.61	6.72
16	12	(6, 6)	0.03	0.33	4.00
17				$\sum xp(x) =$	$\sum x^2 p(x) =$
18				7.00	54.83
19					
20					
21				Formula	
22		Expectation of X E(X)	7.00	=SUM(D6:D16)	
23		E(X <sup>2</sup> )	54.83	=SUM(E6:E16)	
24		Variance V(X)	5.83	=C\$23-C\$22^2	