	A	B	C	D	E	F	G
1	Aidan Chin				die 1	die 2	sum
2	ECE 202 E5				1	1	=E2+F2
3	45219				2	=F2	=E3+F3
4	this excel doc calculates the probability of getting a certain number from a 2 dice roll				3	=F3	=E4+F4
5					4	=F4	=E5+F5
6	States of 1 die	Probability P(n)			5	=F5	=E6+F6
7	1	=1/6			6	=F6	=E7+F7
8	=A7+1	=1/6			=E2	=F7+1	=E8+F8
9	=A8+1	=1/6			=E3	=F8	=E9+F9
10	=A9+1	=1/6			=E4	=F9	=E10+F10
11	=A10+1	=1/6			=E5	=F10	=E11+F11
12	=A11+1	=1/6			=E6	=F11	=E12+F12
13					=E7	=F12	=E13+F13
14					=E8	=F13+1	=E14+F14
15	Number of dice (N)	2			=E9	=F14	=E15+F15
16	(predict) Number of microstates (n)	=6^B15			=E10	=F15	=E16+F16
17	(predict) Number of macrostates	=B15*(6-1)+1			=E11	=F16	=E17+F17
18					=E12	=F17	=E18+F18
19	macrostate n (total # on both dice)	# of microstates	Probability P(n)		=E13	=F18	=E19+F19
20	2	=COUNTIF(G:G, A20)	=B20/$B$16		=E14	=F19+1	=E20+F20
21	=A20+1	=COUNTIF(G:G, A21)	=B21/$B$16		=E15	=F20	=E21+F21
22	=A21+1	=COUNTIF(G:G, A22)	=B22/$B$16		=E16	=F21	=E22+F22
23	=A22+1	=COUNTIF(G:G, A23)	=B23/$B$16		=E17	=F22	=E23+F23
24	=A23+1	=COUNTIF(G:G, A24)	=B24/$B$16		=E18	=F23	=E24+F24
25	=A24+1	=COUNTIF(G:G, A25)	=B25/$B$16		=E19	=F24	=E25+F25
26	=A25+1	=COUNTIF(G:G, A26)	=B26/$B$16		=E20	=F25+1	=E26+F26
27	=A26+1	=COUNTIF(G:G, A27)	=B27/$B$16		=E21	=F26	=E27+F27
28	=A27+1	=COUNTIF(G:G, A28)	=B28/$B$16		=E22	=F27	=E28+F28
29	=A28+1	=COUNTIF(G:G, A29)	=B29/$B$16		=E23	=F28	=E29+F29
30	=A29+1	=COUNTIF(G:G, A30)	=B30/$B$16		=E24	=F29	=E30+F30
31					=E25	=F30	=E31+F31
32	CHECK total # of macrostates	CHECK total # of microstates	CHECK total probability		=E26	=F31+1	=E32+F32
33	=COUNT(A20:A30)-B17	=SUM(B20:B30)-B16	=SUM(C20:C30)		=E27	=F32	=E33+F33
34	Should be zero	should be zero	should be 100%		=E28	=F33	=E34+F34
35					=E29	=F34	=E35+F35
36	Most likely macrostate	=INDEX(G2:G37,MODE(MATCH(G2:G37,G2:G37,0)))			=E30	=F35	=E36+F36
37					=E31	=F36	=E37+F37