Variables

Matrix [A] – Input
Matrix [B] – Output
Matric [C] – Used for counting through each set of probabilities.

L_1 – Used to store the dimensions of Matrix [A]

A – Number of rows in Matrix [A]
B – Number of columns in Matrix [A]
G – Used to calculate the expected number of outcomes
P – Used to step through the number of possible outcomes
X – Used to step through rows
Y – Used to step through columns

Step-by-step

1) Stores the dimensions of Matrix [A] to L_1
2) Stores the number of rows from Matrix [A] to A
3) Stores the number of columns from Matrix [A] to B
4) Creates counting matric [C] with B number of columns and 2 rows
5) Fills Matrix [C] with 1s to facilitate counting
6) Resets G to 1 for counting
7) Resets P to 1 for counting
8) Loop that counts Y from 1 to B (columns)
9) Resets X to 1 for counting
10) Loop that counts X through to A (rows)
11) Looks for a 0 value to stop counting of rows
12) Then
13) Make X large enough to exit the loop from line 10
14) Else
15) Store X as the max number of values in row 1, column Y of Matrix [C]
16) Count X up by 1
17) End of loop from line 11
18) End of loop from line 10 (rows)

19) Multiply G by the number of values in the column
20) End loop from line 8 (columns)
21) Creates Matrix [B] with G rows and B+1 columns
22) Fill Matrix [B] with 1s for later multiplication
23) Loop while the counting number is less than the max in column 1 of Matrix [C]
24) Loop that counts Y from 1 to B (columns)
25) Multiply the current value from the current column to the final total.
26) Store which value was used in Matrix [B]
27) End loop from line 24
28) Decrease Y so it can be used to step backwards through the columns
29) Increase the value counter in the last column by 1
30) Loop steps through value columns as long as each value counter needs to be increased
31) resets the value counter in the current column
32) Moves the column focus
33) adds 1 to current column
34) End loop from line 30
35) Increases outcome counter (Matrix [B] row)
36) End loop from line 23