	A	B	C	D	E	F	G	H
1	192 families had following distribution of girl child among the first three children. Find the expected							
2	frequencies on the basis that							
3	(i) both sex are equally probable							
4	(ii) the probability may be vary							
5								
6	(i) when both sex are equally probable							
7	No of girl child (x)	No. Of families (f)	p(x)	f(x) Expected Frequency				
8			=BINOM.DIST (A9,C17,C 20,FALSE)	=C9*C19				
9	0	77	0.125	24				
10	1	90	0.375	72				
11	2	20	0.375	72				
12	3	5	0.125	24				
13		192						
14								
15								
16	Cases	Symbol	Value	Formula				
17	No. Of Cases	n	3	=MAX(A9:A12)				
18	Mean	np	0.755208333	=SUMPRODUCT(A9:A12,B9:B12)/SUM(B9:B12)				
19	Total Frequency	N	192	=SUM(B9:B12)				
20	Prob. Of Success	p	0.5	since both sex are equally probable				
21	Prob. Of Failure	q	0.5	=1-C20				
22								
23								
24	(ii) when the probability may be vary							
25	No of girl child (x)	No. Of families (f)	p(x)	f(x) Expected Frequency	Round f(x)			
26			=BINOM.DIST (A27,C35,$C $38,FALSE)	=C27*C37	=ROUND(D27,0)			
27	0	77	0.418952089	80.43880108	80			
28	1	90	0.422840275	81.18533288	81			
29	2	20	0.142254849	27.31293101	27			
30	3	5	0.015952787	3.062935032	3			
31		192						
32								
33								
34	Cases	Symbol	Value	Formula				
35	No. Of Cases	n	3	=MAX(A27:A30)				
36	Mean	np	0.755208333	=SUMPRODUCT(A27:A30,B27:B30)/SUM(B27:B30)				
37	Total Frequency	N	192	=SUM(B27:B30)				
38	Prob. Of Success	p	0.251736111	=C36/C35				
39	Prob. Of Failure	q	0.748263889	=1-C38				
40								
41								
42	Expected frequencies when both sex are equally probable are:							
43	24							
44	72							
45	72							
46	24							
47								
48								
49	Expected frequencies when probability may vary are:							
50	80							
51	81							
52	27							
53	3							