A sample of calculating probablities of events assuming A Poisson Distribution for the observations. Fictitious scenario is for occurrences of rain. A number of variations are examined.

- Records show 4 storms per year for last 20 years
- Assume Poisson distribution
- What probability of NO storm next year?

VARIABLE DEFINITIONS FROM GIVEN INFORMATION (Basic Scenario)

Number of Storms per year observed, v =	4
Number of Years interested in (next year), t =	1
x=0, Occurrences looking for (NO rain), x =	0

x	v	t	Result	Explanation
0	4	1	0.018315639	Prob of ZERO storms next year
1	4	1	0.073262556	Prob of ONE storms next year
2	4	1	0.14652511	Prob of TWO storms next year
3	4	1	0.19536681	Prob of THREE storms next year
4	4	1	0.19536681	Prob of FOUR storms next year
0	4	2	0.00033546263	Prob of ZERO storms next 2 years
1	4	2	0.002683701	Prob of ONE storms next 2 years
2	4	2	0.010734804	Prob of TWO storms next 2 years
3	4	2	0.028626144	Prob of THREE storms next 2 years
4	4	2	0.057252288	Prob of FOUR storms next 2 year
0	4	3	0.0000061442124	Prob of ZERO storms next 3 years
1	4	3	0.000073730548	Prob of ONE storms next 3 years
2	4	3	0.00044238329	Prob of TWO storms next 3 years
3	4	3	0.0017695332	Prob of THREE storms next 3 years
4	4	3	0.0053085995	Prob of FOUR storms next 2 year

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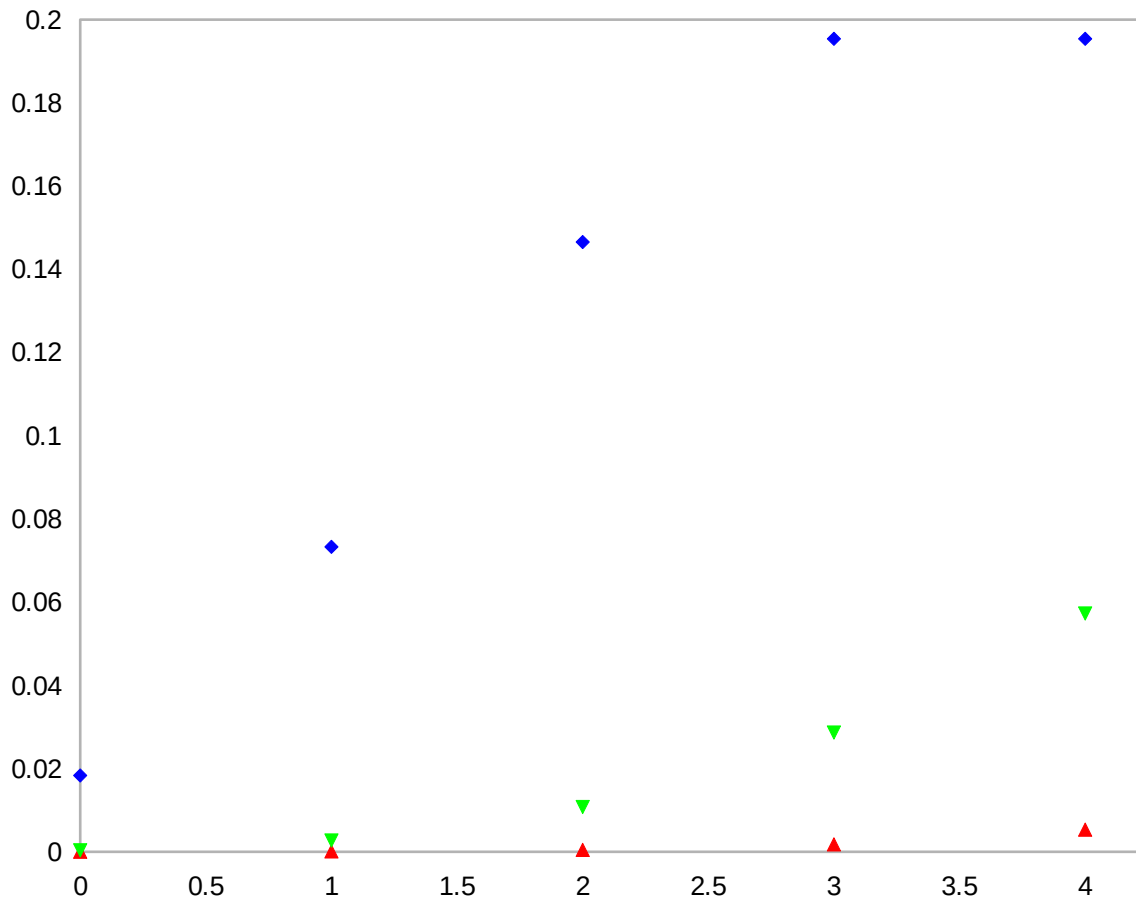
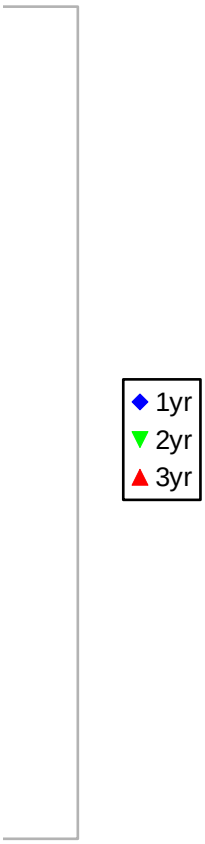

0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0
0.5
1
1.5
2
2.5
3
3.5
4


1yr
2yr
3yr
4.5