

Name:

Quiz 10, Attempt 1

13. A fleet of 50 airplanes was observed for 1000 flying hours, and the number of planes, m_x , that suffered x component failures in that time is recorded below:

x	0	1	2	3	4	≥ 5
m_x	1	10	9	7	6	11

Suppose you want to test the null hypothesis that the number of component failure is NB(r, p). The mass function is zero except for non-negative integers k . For non-negative integers k , the mass function is:

$$\binom{k+r-1}{k} \cdot (1-p)^r p^k$$

Assuming that no bins need to be collapsed, what will the distribution of the test statistic be under the null hypothesis?

Chi squared with 3 degrees of freedom.