Welcome to the Hypothesis Testing calculator made by ALIAS GEORGE

Select the Calculator (type the no corresponding eg 1 for one mean Large sample)

1. One Mean Large sample
2. One Mean Small sample
3. Two Mean Large sample
4. Two Mean Small sample with both normal and $\sigma 1 = \sigma 1$
5. One Variance Test
6. Two Variance Test
7. Matched Pair Test
8. One Proportion Test
9. Multi Proportion t-Test
10. Two Proportion Difference Test
11. R and C Analysis Test
12. Goodness Fit Test

12

Select the Calculator

Discrete Distribution

```
1. Goodness Fit for Poisson Test
2. Goodness Fit for Binomial Test
3. Goodness Fit for Geometric Test
4. Goodness Fit for Hyper Geometric Test
5. Goodness Fit for Uniform Discrete Test

Continuous Distribution
6. Goodness Fit for Normal Test
7. Goodness Fit for Log Normal Test
8. Goodness Fit for Alpha Test
9. Goodness Fit for Beta Test
10. Goodness Fit for Gamma Test
11. Goodness Fit for Weibull Test
12. Goodness Fit for Exponential Test
13. Goodness Fit for Uniform Continuous Test
1



Level of significance: 0.05
Enter the λ: 4.6
Enter the no of Categories: 14

Does the random variable values is in the order 0,1,3,.....,12,13
1. yes
2. no
```

1

```
Enter the Observed Frequency for 0 3
Enter the Observed Frequency for 1 15
Enter the Observed Frequency for 2 47
Enter the Observed Frequency for 3 76
Enter the Observed Frequency for 4 68
Enter the Observed Frequency for 5 74
Enter the Observed Frequency for 6 46
Enter the Observed Frequency for 7 39
Enter the Observed Frequency for 8 15
Enter the Observed Frequency for 9 9
Enter the Observed Frequency for 10 5
Enter the Observed Frequency for 11 2
Enter the Observed Frequency for 12 0
Enter the Observed Frequency for 13 1
```

| X | Observed Frequency | Poisson Probabilities | Expected Frequency |
|---|---|---|---|
| 0 | 3 | 0.01 | 4.0 |
| 1 | 15 | 0.046 | 18.4 |
| 2 | 47 | 0.106 | 42.4 |
| 3 | 76 | 0.163 | 65.2 |

| 4 | 68 | 0.188 | 75.2 |
|---|---|---|---|
| 5 | 74 | 0.173 | 69.1 |
| 6 | 46 | 0.132 | 52.8 |
| 7 | 39 | 0.087 | 34.8 |
| 8 | 15 | 0.05 | 20.0 |
| 9 | 9 | 0.026 | 10.4 |
| 10 | 5 | 0.012 | 4.8 |
| 11 | 2 | 0.005 | 2.0 |
| 12 | 0 | 0.002 | 0.8 |
| 13 | 1 | 0.001 | 0.4 |

Combined categories (initial,final) [(0, 1), (10, 13)]

| Observed Frequency | Poisson Probabilities | Expected Frequency |
|---|---|---|
| 18 | 0.056 | 22.4 |
| 47 | 0.106 | 42.4 |
| 76 | 0.163 | 65.2 |
| 68 | 0.188 | 75.2 |
| 74 | 0.173 | 69.1 |
| 46 | 0.132 | 52.8 |
| 39 | 0.087 | 34.8 |
| 15 | 0.05 | 20.0 |

```
|          9           |          0.026          |         10.4         |
|          8           |  0.020000000000000004   |         8.0          |
+----------------------+-------------------------+----------------------+

Calculations

Total Chi_square: 7.01024417983987

Decision
The null must be rejected if χ^2 < 16.919

Failure to reject Null 'Data fit to the distribution'


Process finished with exit code 0
```