XLSTAT 2024.4.0.1424 - Distribution fitting - Start time: 01/08/2025 at 23:58:05 / End time: 01/08/2025

Data: Workbook = car_mechanic_shop_arrivals_pst.xlsx / Sheet = Sheet1 / Range = Sheet1!$P$1:$P$10

Significance level (%): 5

Distribution: Poisson

Estimation method: Maximum likelihood

Convergence: 0.00001

Summary statistics

Summary statistics:

Variable	Observations	Obs. with missing	Obs. without	Minimum	Maximum	Mean	Std. deviation
ARRIVAL	100	0	100	10.000	36.000	20.080	4.343

Estimated parameter (Poisson):

Parameter	Value	Standard error
lambda	20.080	0.448

The main algorithm did not converge and stop after the maximum number of iterations.

Statistics estimated on the input data and computed using the estimated parameters of the Poisson dis

Statistic	Data	Parameters
Mean	20.080	20.080
Variance	18.862	20.080
Skewness (	0.764	0.223
Kurtosis (P	0.877	0.050

Chi-square test:

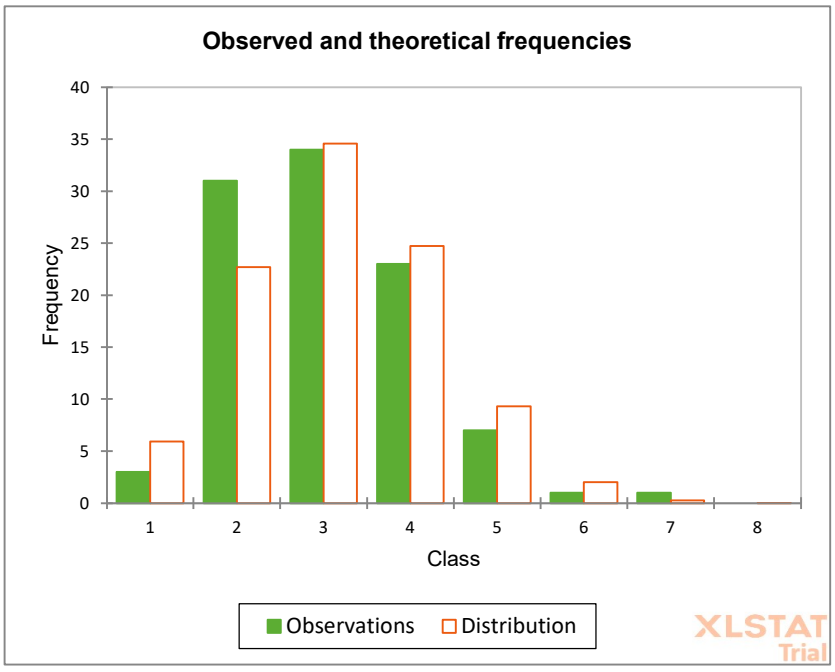
Chi-square	7.772
Chi-square	12.592
DF	6
p-value (Tw	0.255

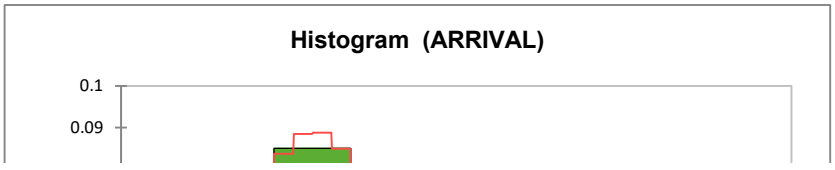
alpha	0.05

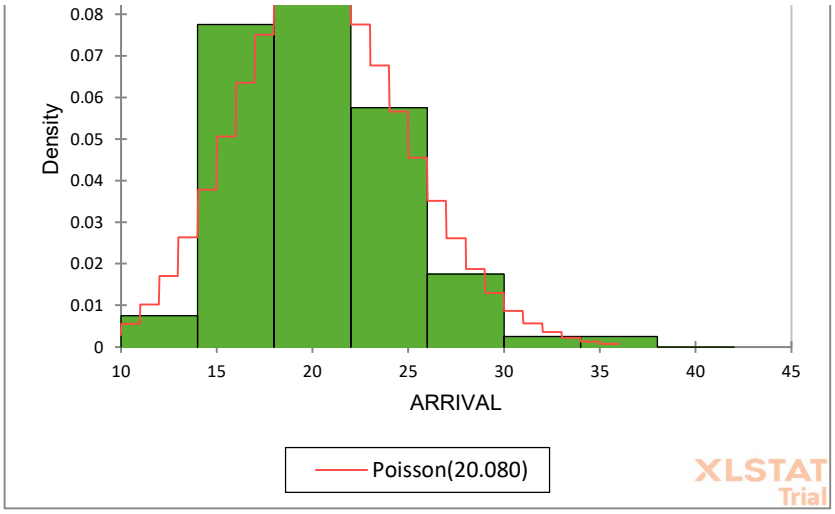
Test interpretation:
H0: The sample follows a Poisson's distribution
Ha: The sample does not follow a Poisson's distribution
As the computed p-value is greater than the significance level alpha=0.05, one cannot reject the null hypothesis H0.

Comparison between the observed and theoretical frequencies:

Class	Lower bound [	Upper bound [	Frequency (Data)	Frequency (Distributi	Chi-square
1	10.000	14.000	3	5.922	1.442
2	14.000	18.000	31	22.700	3.035
3	18.000	22.000	34	34.593	0.010
4	22.000	26.000	23	24.730	0.121
5	26.000	30.000	7	9.295	0.567
6	30.000	34.000	1	1.998	0.499
7	34.000	38.000	1	0.262	2.076
8	38.000	42.000	0	0.022	0.022







Descriptive statistics for the intervals (ARRIVAL):

Lower bound	Upper bound	Frequency	Relative frequency	Density (Data)	Density (Distribution)
10	14	3	0.030	0.008	0.010
14	18	31	0.310	0.078	0.091
18	22	34	0.340	0.085	0.273
22	26	23	0.230	0.058	0.340
26	30	7	0.070	0.018	0.205
30	34	1	0.010	0.003	0.067
34	38	1	0.010	0.003	0.013
38	42	0	0.000	0.000	0.001

Order

at 23:58:06

1 / 100 rows and 1 column

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