XLSTAT 2024.4.0.1424 - Distribution fitting - Start time: 01/08/2025 at 23:31:45 / End time: 01/08/2025
Data: Workbook = car_mechanic_shop_arrivals_pst.xlsx / Sheet = Sheet1 / Range = Sheet1!$N$1:$N$10
Significance level (%): 5
Distribution: Exponential
Estimation method: Maximum likelihood
Convergence: 0.00001

Summary statistics

Summary statistics:

Variable	Observations	Obs. with missing	Obs. without	Minimum	Maximum	Mean	Std. deviation
SERVICE	100	0	100	1.000	103.000	30.210	22.877

Estimated parameter (Exponential):

Parameter	Value	Standard error
lambda	0.033	0.003

Log-likelihood statistics:

Log-likelihc	-440.817
BIC(LL)	886.240
AIC(LL)	883.635

Statistics estimated on the input data and computed using the estimated parameters of the Exponentia

Statistic	Data	Parameters
Mean	30.210	30.210
Variance	523.339	0.001
Skewness (	1.088	2.000
Kurtosis (P	0.595	6.000

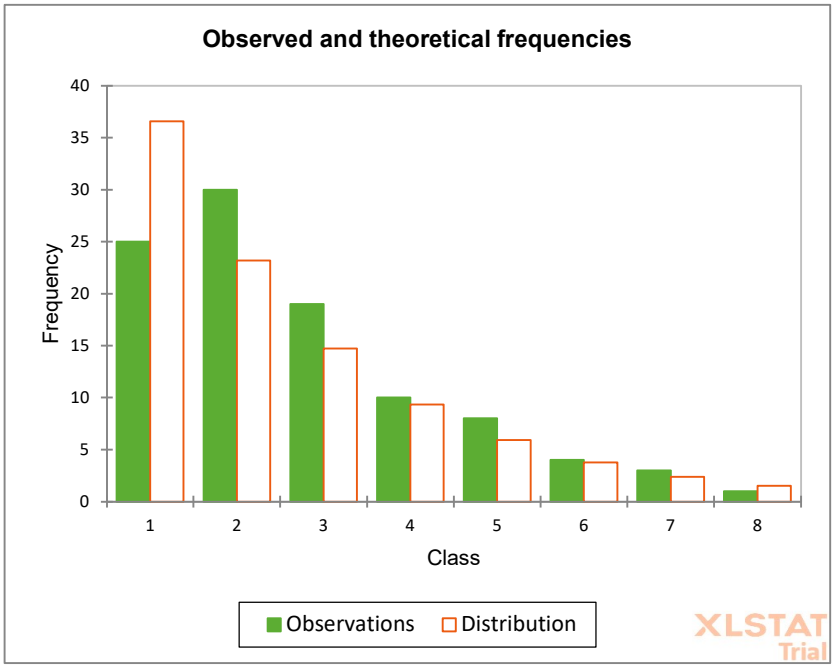
Chi-square test:

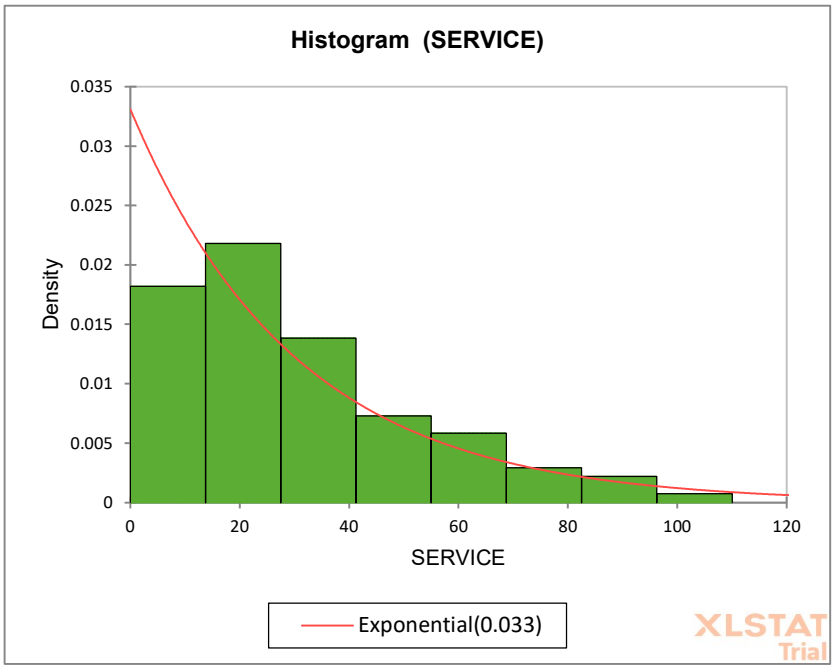
Chi-square	8.029
Chi-square	12.592
DF	6
p-value (Tw	0.236
alpha	0.05

Test interpretation:
H0: The sample follows an Exponential distribution
Ha: The sample does not follow an Exponential 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	0.000	13.750	25	36.565	3.658
2	13.750	27.500	30	23.195	1.997
3	27.500	41.250	19	14.714	1.249
4	41.250	55.000	10	9.334	0.048
5	55.000	68.750	8	5.921	0.730
6	68.750	82.500	4	3.756	0.016
7	82.500	96.250	3	2.383	0.160
8	96.250	110.000	1	1.511	0.173





Descriptive statistics for the intervals (SERVICE):

Lower bound	Upper bound	Frequency	Relative frequency	Density (Data)	Density (Distribution)
0.000	13.750	25	0.250	0.018	0.366
13.750	27.500	30	0.300	0.022	0.232
27.500	41.250	19	0.190	0.014	0.147
41.250	55.000	10	0.100	0.007	0.093
55.000	68.750	8	0.080	0.006	0.059
68.750	82.500	4	0.040	0.003	0.038
82.500	96.250	3	0.030	0.002	0.024
96.250	110.000	1	0.010	0.001	0.015

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l distribution: