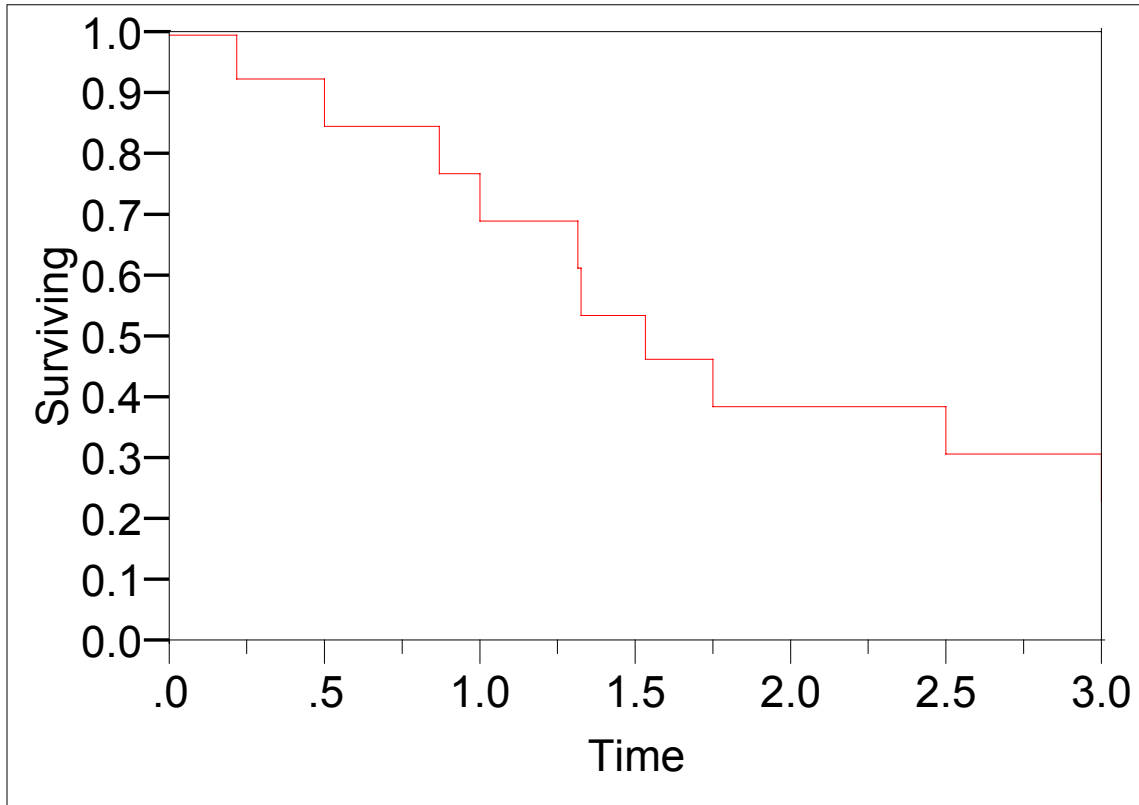


JMP analysis of Airplane Component Data

Product-Limit Survival Fit: Time (hours) to failure

Survival Plot



Time to event: Time
Censored by Censor

Summary

Group	N Failed	N Censored	Mean	Std Error
Combined	10	3	1.77308	0.28592

Quantiles

Group	Median Time	Lower95%	Upper95%	25% Failures	75% Failures
Combined	1.54	0.88	3	1	3

Parametric Survival Fit: Exponential Distribution

Whole Model Test

Model	-LogLikelihood	ChiSquare	DF	Prob>Chisq
Difference	0	0.0000	0	0.0000
Full	17.1111051			
Reduced	17.1111051			

Parameter Estimates

Term	Estimate	Std Error
Intercept	0.83506846	0.3162258

Estimate of λ is $e^{-0.835} = 0.434$

Estimates of Time Quantile

Prob Survival	Time	Lower 95%	Upper 95%
0.5	1.5976847	0.859645	2.969361

Estimates of Survival

Time	Prob Failure	Lower 95%	Upper 95%	Prob Survival
5	0.88573	0.62948	0.97250	0.11427

Parametric Survival Fit: Weibull Distribution

Whole Model Test

Model	-LogLikelihood	ChiSquare	DF	Prob>Chisq
Difference	0	0.0000	0	0.0000
Full	16.3938226			
Reduced	16.3938226			

Parameter Estimates

Term	Estimate	Std Error
Intercept	0.82116696	0.2231064
Delta	0.70548847	0.1914375

Estimate of λ is $e^{-0.821} = 0.44$ and the estimate of β is $1/0.7055 = 1.42$

Estimates of Survival

Time	Prob Failure	Lower 95%	Upper 95%	Prob Survival
5	0.95296	0.73879	0.99316	0.04704

Estimates of Time Quantile

Prob Survival	Time	Lower 95%	Upper 95%
0.5	1.7552237	1.1350821	2.7141738