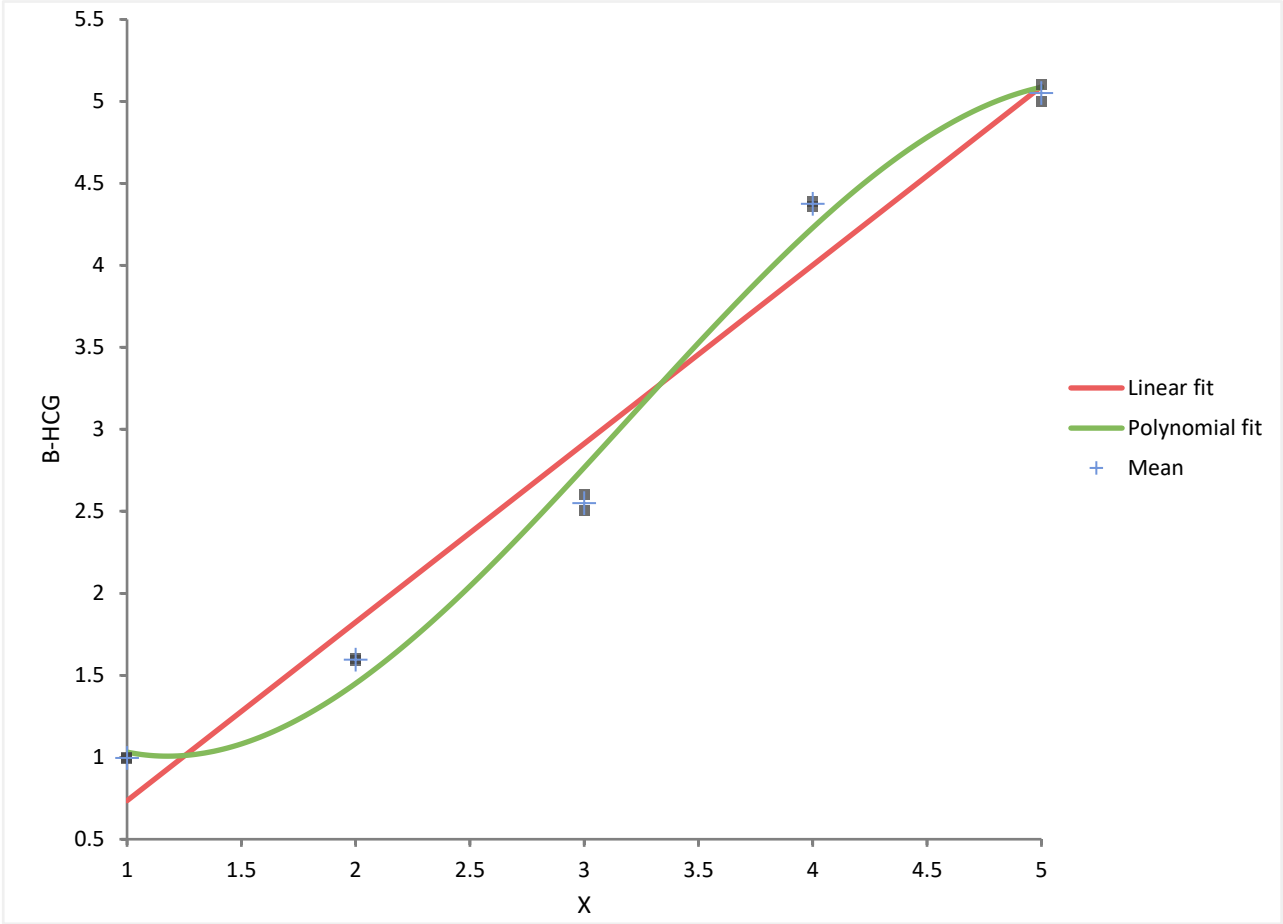


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Descriptives



N | 10
Design | 5 X x 2 Observations

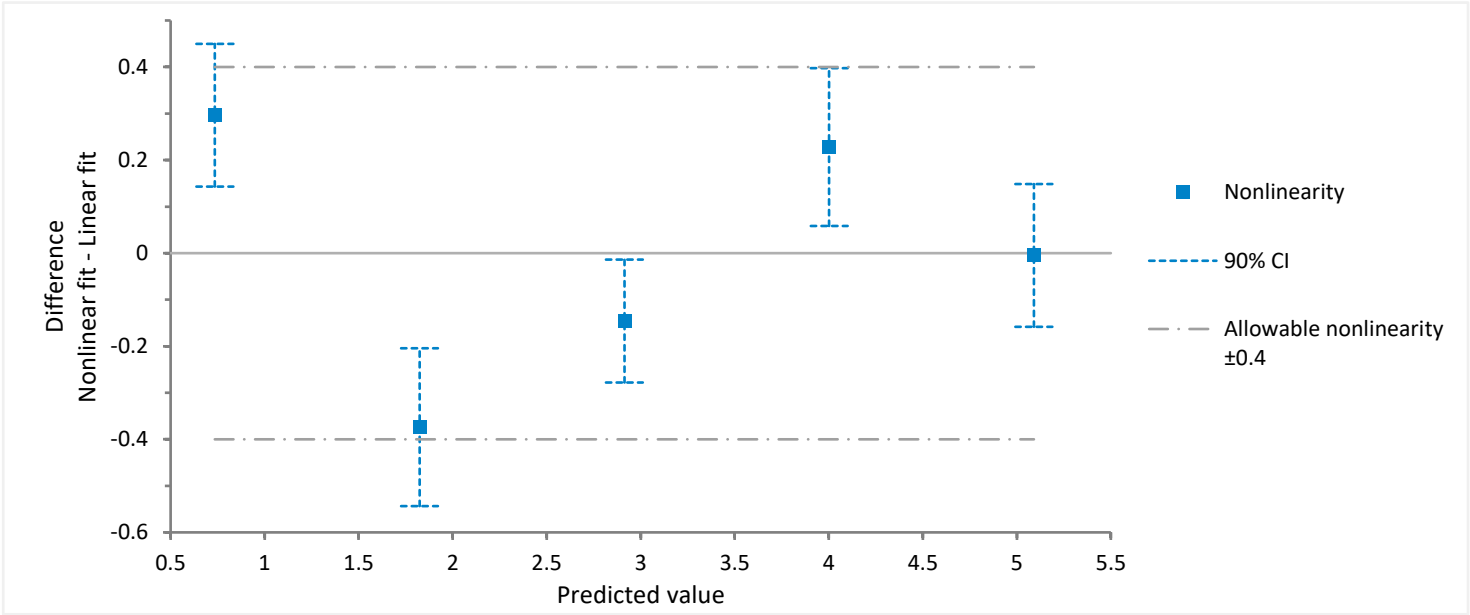
Measuring interval | 1.000 to 5.000

Linearity

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X	Linear fit	Nonlinear fit (3rd order polynomial)	Nonlinearity	90% CI	Allowable nonlinearity	TOST p-value
1	0.735	1.031	0.296	0.143 to 0.450	±0.400	0.1185 ²
2	1.824	1.450	-0.374	-0.544 to -0.204	±0.400	0.3874 ²
3	2.913	2.767	-0.146	-0.278 to -0.014	±0.400	0.0048 ¹
4	4.002	4.230	0.228	0.058 to 0.398	±0.400	0.0483 ¹
5	5.091	5.086	-0.005	-0.158 to 0.149	±0.400	0.0012 ¹

H0: $|\mu_N - \mu_L| \geq \epsilon$
The difference between the linear and nonlinear fit is not within the allowable nonlinearity.
H1: $|\mu_N - \mu_L| < \epsilon$
The difference between the linear and nonlinear fit is within the allowable nonlinearity.
¹ Reject the null hypothesis in favor of the alternative at the 5% significance level.
² Do not reject the null hypothesis at the 5% significance level.

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Fit Model

Linear fit

RMSE		0.315				
Parameter	Estimate	SE	t	DF	p-value	
Constant	-0.3540	0.23390	-1.51	8	0.1686	
X	1.089	0.070524	1.26	8	0.2425	
Source	SS	DF	MS	F	p-value	
Lack of fit	0.785	3	0.262	124.05	<0.0001	
Pure error	0.011	5	0.002			
Model error	0.796	8	0.099			

2nd order polynomial fit

RMSE		0.304				
Parameter	Estimate	SE	t	DF	p-value	
Constant	0.1560	0.46113	0.34	7	0.7451	
X	0.6519	0.35141	-0.99	7	0.3548	
X ²	0.07286	0.057462	1.27	7	0.2454	
Source	SS	DF	MS	F	p-value	
Lack of fit	0.637	2	0.318	150.86	<0.0001	
Pure error	0.011	5	0.002			
Model error	0.647	7	0.092			

3rd order polynomial fit

RMSE		0.180				
Parameter	Estimate	SE	t	DF	p-value	
Constant	2.263	0.62574	3.62	6	0.0111	
X	-2.308	0.81794	-4.04	6	0.0068	
X ²	1.202	0.30359	3.96	6	0.0075 ¹	
X ³	-0.1254	0.033520	-3.74	6	0.0096 ¹	
Source	SS	DF	MS	F	p-value	
Lack of fit	0.184	1	0.184	87.02	0.0002	
Pure error	0.011	5	0.002			
Model error	0.194	6	0.032			

¹ Nonlinear parameter is different from 0 at the 5% significance level.