Meat lack of fit

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## Correct lack of fit analysis: continuous variable before factor variable

## Analysis of Variance Table
##
## Response: ph
## Df Sum Sq Mean Sq F value Pr(>F)
## time 1 2.85695 2.85695 320.2862 1e-05 \*\*\*
## ctime 3 0.15905 0.05302 5.9435 0.04198 \*
## Residuals 5 0.04460 0.00892
## ---
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

## Wrong approach:factor varible before continuous variable

## Analysis of Variance Table
##
## Response: ph
## Df Sum Sq Mean Sq F value Pr(>F)
## ctime 4 3.0160 0.75400 84.529 8.879e-05 \*\*\*
## Residuals 5 0.0446 0.00892
## ---
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

## SAS output:

| **Source** | **DF** | **Type I SS** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **time** | 1 | 2.85695274 | 2.85695274 | 320.29 | <.0001 |
| **ctime** | 3 | 0.15904726 | 0.05301575 | 5.94 | 0.0420 |

| **Source** | **DF** | **Type III SS** | **Mean Square** | **F Value** | **Pr > F** |
| --- | --- | --- | --- | --- | --- |
| **time** | 0 | 0.00000000 | . | . | . |
| **ctime** | 3 | 0.15904726 | 0.05301575 | 5.94 | 0.0420 |