Determine Significance of Linear Regression Relationship

Load the `hald` data set. Use `heat` as the response variable and `ingredients` as the predictor data.

```
load hald
y = heat;
X1 = ingredients;
x1 = ones(size(X1,1),1);
X = [x1 X1];      % Includes column of ones
```

Perform multiple linear regression and generate model statistics.

```
[~,~,~,~,stats] = regress(y,X)
```

```
stats = 1×4
    0.9824   111.4792    0.0000    5.9830
```

Because the R^2 value of `0.9824` is close to 1, and the *p*-value of `0.0000` is less than the default significance level of 0.05, a significant linear regression relationship exists between the response `y` and the predictor variables in `X`.

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