
```
function [Residuals, Res_mean, Res_std, Residuals_2, time_2,
    Res2_mean, Res2_std] = Residual(V_exp,V_theo,time)

% Purpose: calculates the absolute value of the difference between
% the experimental and theoretical velocity values
% Author: Jacob Starkel
% Date Completed: 3/12/2021

Residuals = V_exp-V_theo;

Res_mean = mean(Residuals);

Res_std = std(Residuals);

Not enough input arguments.

Error in Residual (line 7)
Residuals = V_exp-V_theo;
```

Sort out outliers

```
j = 1;

for i = 1:length(Residuals)

    if Residuals(i) <= Res_mean + 1.5*Res_std && Residuals(i) >=
        Res_mean - 1.5*Res_std

        Residuals_2(j) = Residuals(i);

        time_2(j) = time(i);

        j = j+1;

    end
end

Res2_mean = mean(Residuals_2);

Res2_std = std(Residuals_2);
```

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