Rate of Change in CO2 emissions

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load data

```
mauna = load('Mauna.txt');
barrow = load('Barrow.txt');
```

time step vector

```
t = (1:length(mauna))';
```

rates of change

use linear regression to get trendline for each get fit parameters

```
a_mauna = polyfit(t, mauna, 1);
a_barrow = polyfit(t, barrow, 1);
% get slope (first parameter)
m_mauna = a_mauna(2) * 14 / 365;
m_barrow = a_barrow(2)* 14 / 365;
fprintf('Manua Kea: %f ppm/yr\n', m_mauna)
fprintf('Barrow: %f ppm/yr\n', m_mauna)
```

```
Manua Kea: 12.998108 ppm/yr
Barrow: 12.998108 ppm/yr
```

time when 10% increase is reached

```
lvl_m = mauna(1);
lvl_b = barrow(1);
intercept_m = a_manua(1);
intercept_b = a_barrow(1);
t_mauna = (1.1*lvl_m - intercept_m) / m_mauna;
t_barrow = (1.1*lvl_b - intercept_b) / m_barrow;
disp(t_mauna)
disp(t_barrow)
```

```
Undefined function 'a_manua' for input arguments of type 'double'.

Error in co2 (line 24)
intercept_m = a_manua(1);
```

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