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# 6.00.2x Lab: Curve Fitting

We're trying out an experimental type of problem in this iteration of 6.00.2x. Try it out and let us know what you think!

## Info

In this section, we provide you with a few choices of datasets, all found in Google Public Data (<https://www.google.com/publicdata/directory?hl=en>). The datasets are supplied by The World Bank. (<http://www.worldbank.org/>) Play around with the options, observe the results and remember, the complex model isn't always the correct model!

## Step 1: Data

Mobile cellular subscriptions

## Step 2: Parameters

Specify your curve fitting parameters below.

Regression method

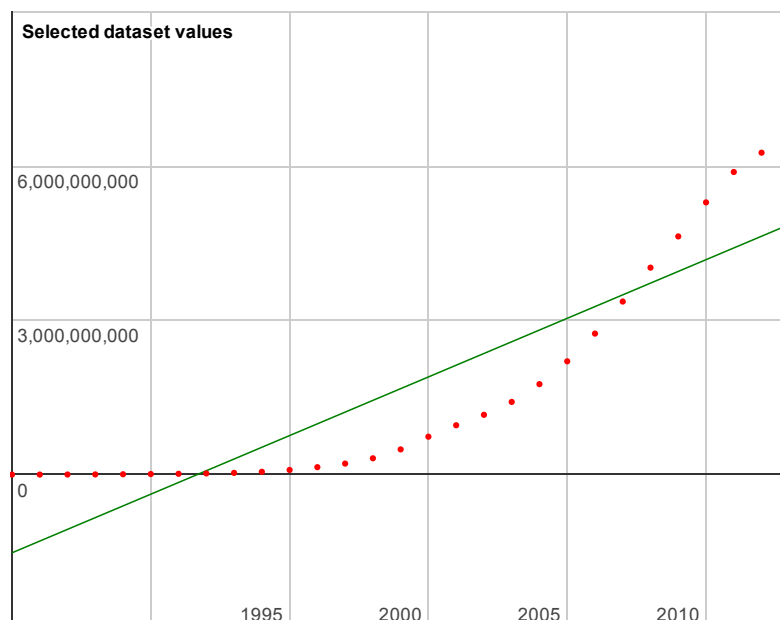
Linear

Degree of polynomial fit:

2

## Step 3: Fitting

Your selected dataset and fitted curve is plotted below.




Sum of squared error:

2.8871e+19

Equation:

$y = 228169439.34x + -454437$

In the "GDP per capita" dataset, is a polynomial of degree 18 a better fit than a straight line?

- ☒ Yes 
- ☐ No

In the "GDP per capita" dataset, what are possible dangers of fitting a more complicated model to the data (overfitting)? Check all that apply.

- ☒ Modeling noise in the data.
- ☒ Bad predictive value for new data not part of existing dataset.
- ☐ A low sum of squares error makes the fit look "too good".

Check

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