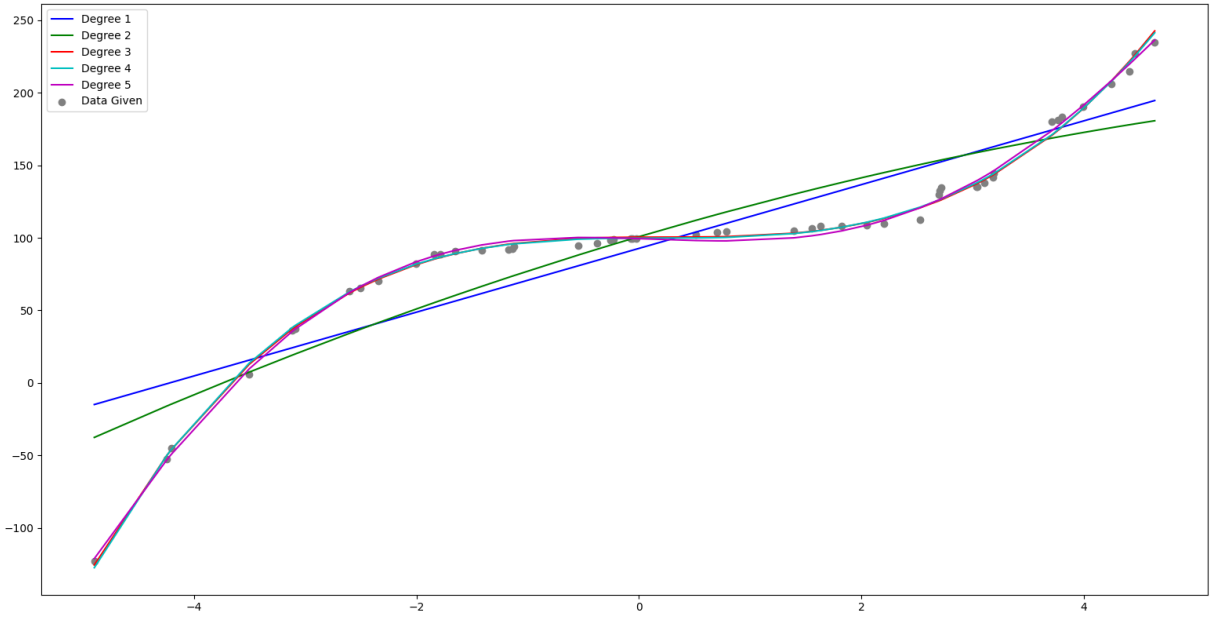
Katherine Sandys

Problem 1: Polynomial regression'

The output of paramFits:

```
[array([21.99190792, 92.70531403]), array([ -1.15834068,  22.60822925, 100.79905593]), array([  1.66680649,  -1.19334469,   0.39581103, 100.43721
865]), array([-1.43365571e-02,  1.66770942e+00, -9.05694362e-01,  3.39499592e-01,
        9.97620446e+01]), array([-2.31737037e-02, -1.96196620e-02,  2.27429003e+00, -8.64397166e-01,
       -2.65996605e+00,  9.94138526e+01])]
```



The degree polynomial that the relationship seems to follow is degree 3. This is the read colored line, it is hard to see with due to the teal and purple-ish colored lie overlap the red line as well (degree 4 and degree 5 respectively).

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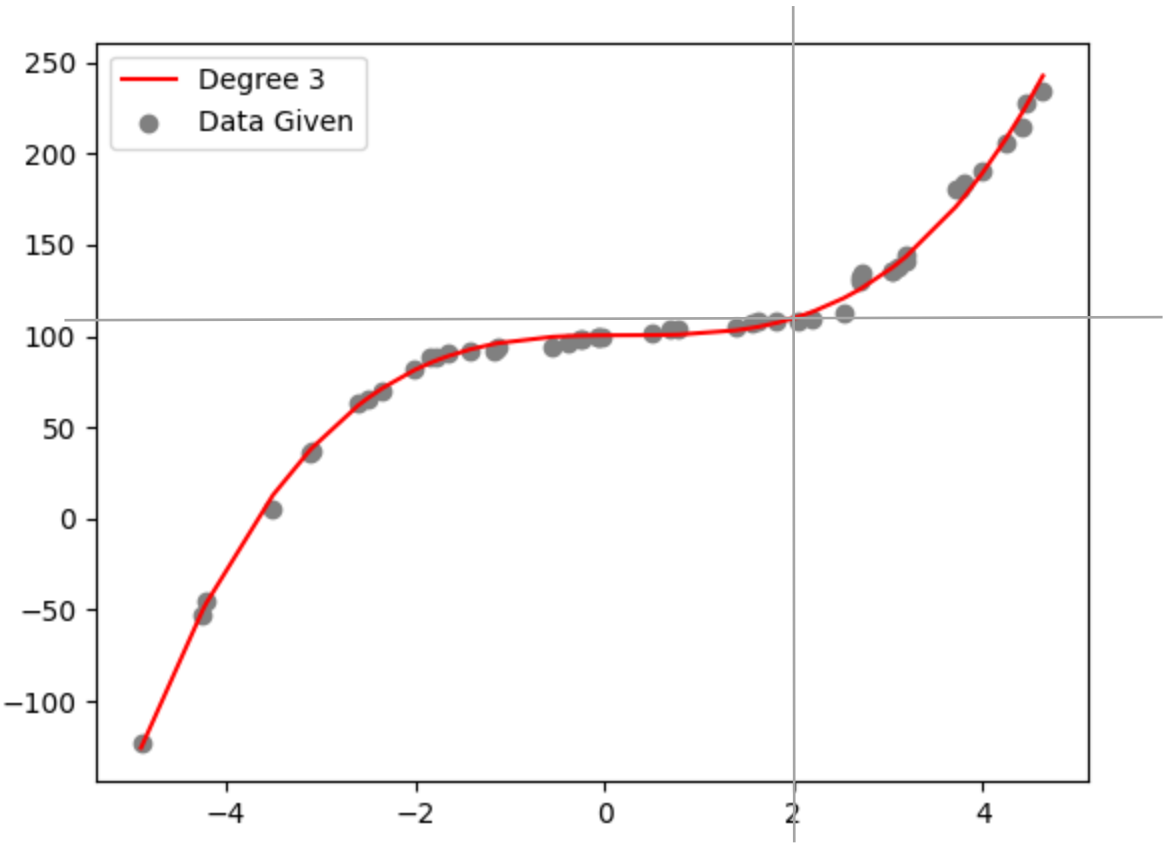

This graph has just the degree 3 polynomial. This allows for better viewing and estimation of future values.

If a new data point at x = 2 the predicted value of y would be approximately 105. This is an approximation so the actual value could be a bit off.