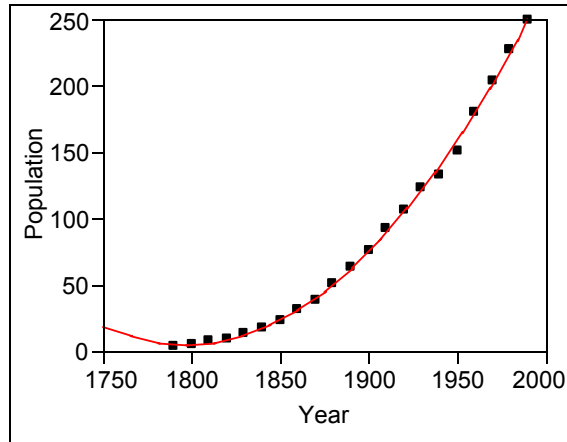


## U.S. Population data: centered variables

**Response: Population**

**Explanatory: Year, (Year - 1890)<sup>2</sup>**



### Polynomial Fit Degree=2

Predicted Population =  $-2235.197 + 1.2154092 \text{ Year} + 0.0065063 (\text{Year}-1890)^2$

### Summary of Fit

RSquare	0.998883
RSquare Adj	0.998759
Root Mean Square Error	2.766576
Mean of Response	85.78257
Observations (or Sum Wgts)	21

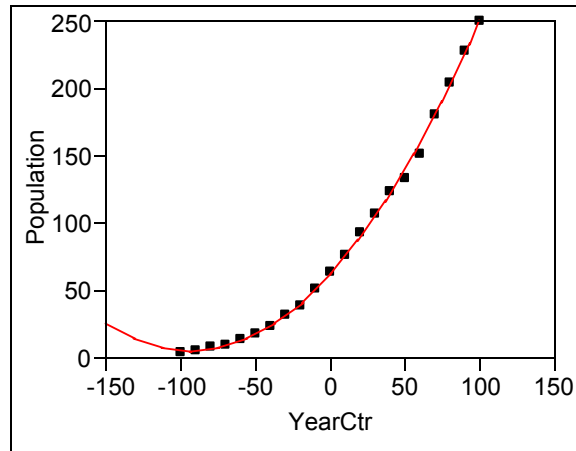
### Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	2	123242.17	61621.1	8050.895
Error	18	137.77	7.7	Prob > F
C. Total	20	123379.94		<.0001

### Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob> t
Intercept	-2235.197	18.86522	-118.5	<.0001
Year	1.2154092	0.00997	121.91	<.0001
(Year-1890) <sup>2</sup>	0.0065063	0.000185	35.22	<.0001

**Response: Population**  
**Explanatory: YearCtr, YearCtr<sup>2</sup>**



**Polynomial Fit Degree=2**

Predicted Population = 61.926035 + 1.2154092 YearCtr + 0.0065063 YearCtr<sup>2</sup>

**Summary of Fit**

RSquare	0.998883
RSquare Adj	0.998759
Root Mean Square Error	2.766576
Mean of Response	85.78257
Observations (or Sum Wgts)	21

**Analysis of Variance**

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	2	123242.17	61621.1	8050.895
Error	18	137.77	7.7	Prob > F
C. Total	20	123379.94		<.0001

**Parameter Estimates**

Term	Estimate	Std Error	t Ratio	Prob> t
Intercept	61.926035	0.9073	68.25	<.0001
YearCtr	1.2154092	0.00997	121.91	<.0001
YearCtr <sup>2</sup>	0.0065063	0.000185	35.22	<.0001