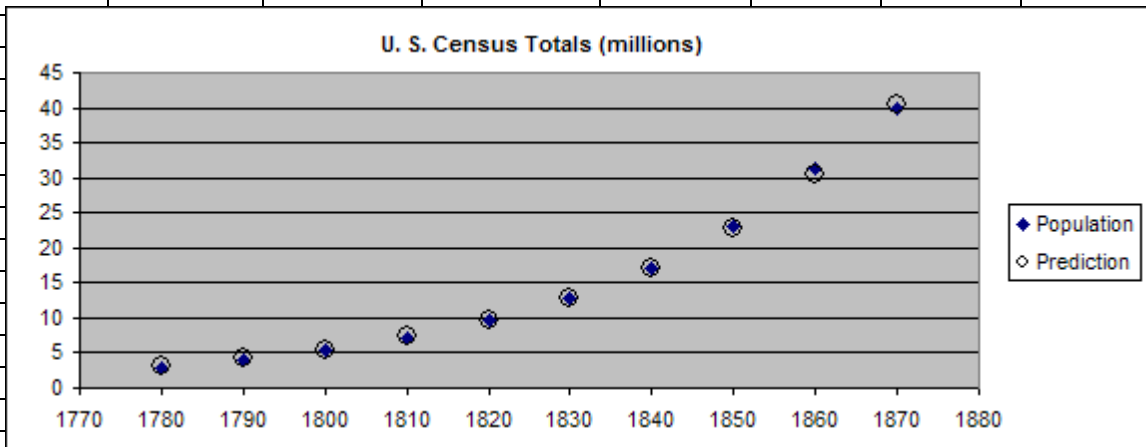


	A	B	C	D	E	F	G	H	I	J
1	x	y data	y model	Data-Model	Squared		Exponential model: $y = a * (1+r)^{(x-1780)}$			
2	Year	Population	Prediction	deviation	deviation		MODEL PARAMETERS			
3	1780	2.8	3.108101	-0.308101	0.094926		3.108101	a: Initial value		
4	1790	3.9	4.134104	-0.234104	0.054804		0.028937	r: Growth rate		
5	1800	5.3	5.498797	-0.198797	0.039520					
6	1810	7.2	7.313983	-0.113983	0.012992					
7	1820	9.6	9.728374	-0.128374	0.016480		<i>Goodness of fit for these settings</i>			
8	1830	12.9	12.93977	-0.039770	0.001582		sum of sq. dev.	1.721981		
9	1840	17.1	17.21127	-0.111268	0.012381					
10	1850	23.2	22.89281	0.307187	0.094364					
11	1860	31.4	30.44987	0.950128	0.902744					
12	1870	39.8	40.50156	-0.701561	0.492188					
13										
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Deviations between the data and model are computed in column D by placing the formula =B3-C3 in cell D3.

A set of positive deviation indicators are computed in column E by placing the formula =D3^2 in cell E3.

The modeling formula in C3 is
 $=\$G\$3 * (1 + \$G\$4) ^ (A3 - 1780)$

Parameters controlling the model are in G3 and G4.

Input data is put into column A, output data is put into column B.

	A	B	C	D	E	F	G	H	I
1	x	data y	model y	Data-Model	Squared		Exponential model: $y = a * (1+r)^{(x-1780)}$		
2	Year	Population	prediction	deviation	deviation		MODEL PARAMETERS		
3	1780	2.8	3.108101	-0.308101	0.094926		3.108101	a: Initial value	
4	1790	3.9	4.134104	-0.234104	0.054804		0.028937	r: Growth rate	
5	1800	5.3	5.498797	-0.198797	0.039520				
6	1810	7.2	7.313983	-0.113983	0.012992				
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10	1850	23.2	22.89281	0.307187	0.094364				
11	1860	31.4	30.44987	0.950128	0.902744				
12	1870	39.8	40.50156	-0.701561	0.492188				
							Goodness of fit for these settings		
							Sum of sq. dev.	1.721981	

The formulas in C3, D3, & E3 are each spread down all the data rows, with relative references changing to match the new row number.

The standard goodness-of-fit indicator is computed with the formula =SUM(E3:E12)

Alternative goodness-of-fit indicators can be used by replacing H8 with an appropriate other formula to minimize.