

Name: _____

Date: _____

Partners: _____

Hour: _____

POPULATION GROWTH OF THE UNITED STATES

PART A: Historical Data

Find a reliable internet source for population statistics to complete the table below.

Years since 1900 (t)	Population (P) in millions of people
0	
10	
20	
30	
40	
50	
60	
70	
80	
90	
100	
110	

Years since 1900 (t)	Population (P) in millions of people
0	
10	

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20	
30	
40	
50	
60	
70	
80	
90	
100	
110	

PART B: Linear Model: Population (P) vs. year (t)

Enter the equation of the line of best fit below. Be sure to use P for population and t for years since 1900. Then complete the chart below using the equation for the line of best fit.

Line of Best Fit: _____

Years since 1900 (t)	Population (P)
0	
10	
20	
30	
40	
50	
60	
70	
80	
90	
100	
110	

Name: _____

Date: _____

Partners: _____

Hour: _____

PART C: Error Estimation of the Linear Model

Enter the formula used to calculate the error of the model here: _____

Years since 1900 (t)	Population (P)
0	
10	
20	
30	
40	
50	
60	
70	
80	
90	
100	
110	
average error:	

PART D: Exponential Model: Population (p) vs. year (t)

Enter the equation of the exponential curve of best fit here: _____

Years since 1900 (t)	Population (P)
0	
10	
20	
30	
40	
50	
60	
70	
80	
90	
100	
110	

Name: _____

Date: _____

Partners: _____

Hour: _____

PART E: Error Estimation of the Exponential Model

Enter the formula used to calculate the error of the model here: _____

Years since 1900 (t)	Population (P)
0	
10	
20	
30	
40	
50	
60	
70	
80	
90	
100	
110	
average error:	