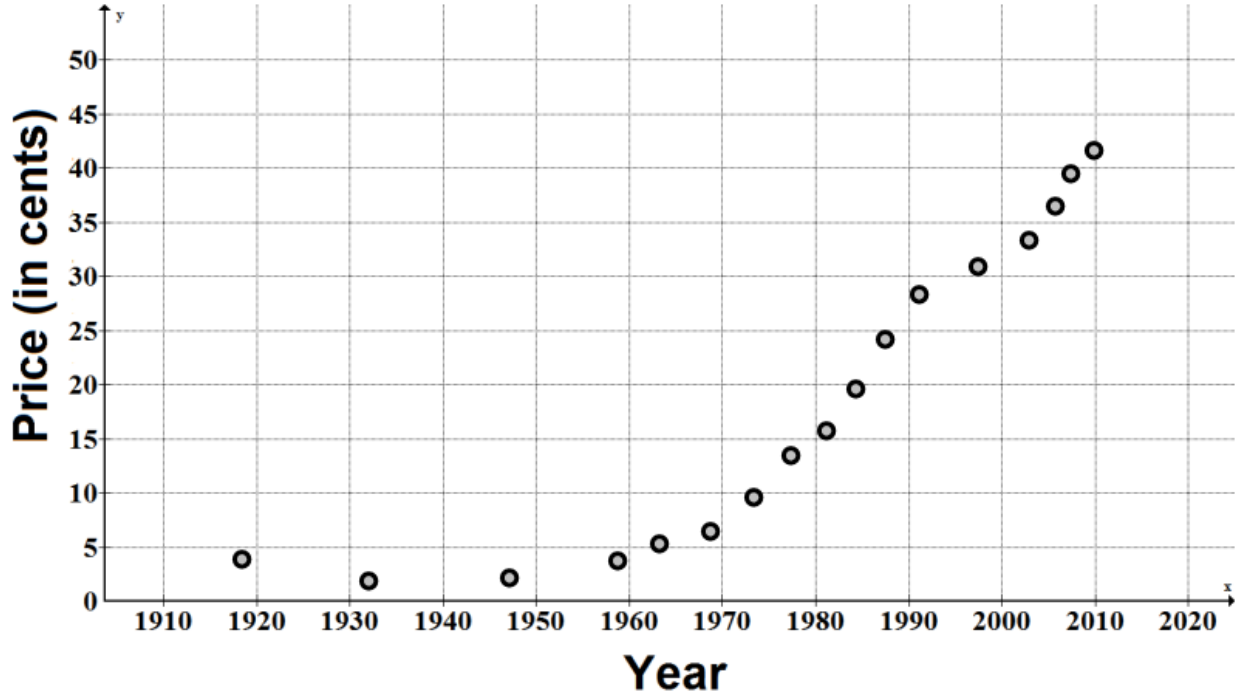# Regression Analyses

Below is a scatter plot of stamp price over time.

1. Based on the scatter plot, alone, do you think this data would be best fit by a linear, quadratic or exponential model? Explain your choice.
2. Use the table of values of the data below to run linear, quadratic and exponential regressions on the data. Complete the table below.

Year	Price of a Stamp (cents)
1918	4
1932	2
1946	3
1958	4
1964	5
1968	6
1974	10
1977	13
1981	16
1984	20
1988	24
1991	27
1998	31
2003	33
2005	37
2006	39
2010	42

Regression Model	Equation	Initial Value	r^2	Confidence
Linear				
Quadratic				
Exponential				

3. Which model is the best fit? How do you know?

4. What does each variable (x and y) represent in each model?

5. Use the scatter plot on your TI-83 to determine when the price of stamps will reach 70 cents. Explain how you did this.

6. Use your equation to estimate the price of stamps in 2030.
   Do you think this estimate is accurate? Why or why not?

7. Use your equation to estimate the price of stamps in 1800.
   Does your answer make sense? Explain why or why not.

8. Was there any part of the analysis that you had trouble with on your TI-83? If so, what?