1. How has your personal experience dealing with mail and post offices changed in your lifetime?

2. Based on your personal experience, how do you think the number of post offices, the pieces of mail handled, the income, and the expenses of the postal service changed over time?

3. Go to [http://about.usps.com/who-we-are/postal-history/pieces-of-mail-since-1789.htm](http://about.usps.com/who-we-are/postal-history/pieces-of-mail-since-1789.htm). Review each of the four columns: pieces of mail handled, number of post offices, income, and expenses. Describe how each of these categories have changed?

4. What type of function do you think could be used to model the income of the United States Postal Service? Why?

5. In 1971, the Post Office Department was transformed into the United States Postal Service, an independent establishment of the executive branch of the Government of the United States. The last year in which the USPS received a tax subsidy from the government was 1982. So, the income earned after this time was explicitly earned from the operations of the postal service. The income in billions of U.S. dollars can be represented by the function 
   \[ f(x) = -0.0697x^2 + 3.8664x + 16.292 \]
   where \( x \) is the number of years after 1983. Use the function to answer the following questions.
   a. What is the basic shape of \( f(x) \)?
   b. What is the \( y \)-intercept of the function? How does the \( y \)-intercept relate to the problem?
   c. What is/are the \( x \)-intercept(s) of the function? How do the \( x \)-intercepts relate to the problem?
   d. In what year did the USPS earn its maximum income? What was it?