

**ROUND TO THE THOUSANDTHS PLACE WHEN NECESSARY.**

1. The median household income for all households in the United States for the years 1994-1998 is shown in the table.

Years Since 1993	1	2	3	4	5
Income (Dollars)	32,264	34,076	35,492	37,005	38,885

A. Using your calculator, find a quadratic model for the data.

B. According to the model, what was the median household income in 1993?

2. The table below shows the average years of life left.

Age (Years)	Life Left (Years)
0	76.5
5	71.7
10	67.7
15	62.8
20	58.0
25	53.3
30	48.5
35	43.8
40	39.2
45	34.6
50	30.1
55	25.8
60	21.8
65	18.1
70	14.6
75	11.5
80	8.8
85	6.5

A. Using your calculator, find a quadratic model for the data.

B. Using your model, if someone is 42 years old, estimate the number of years they have left.

C. Using your model, estimate how old someone is if they have 65 years left.

Solve each of the following quadratic inequalities by factoring.

1.  $6x^2 + 29x - 42 \leq 0$

2.  $4p^2 - 7p > -3$

3.  $0 \geq x^2 - 9$

4.  $x^2 + 6x + 8 < 0$

Solve each of the following quadratic inequalities using Quadratic Formula.

5.  $2x^2 - 7x - 2 < 2$

6.  $3x^2 + 5 \leq 53$