

**Do now: solve the system of equations**

$$-7x - 2y = -13$$

$$x - 2y = 11$$

1- **Objective** To fit data to linear, quadratic, cubic, or quartic models

1- You can use a graphing calculator to help you find functions that model the data in the table shown here.

x	y
0	10.1
5	2.8
10	8.1
15	16.0
20	17.8

**Instructions in the Calculator – Casio FX-9750**

1) Menu 2

2) Use list 1 and list 2 to enter x/y respectively

3) F1 Graph

4) F6 Set – on Graph 1 select Scatter plot.

5) F2 Graph 2 – Select Linear plot.

6) F4 Set. To make sure Graph 1 and 2 are both on the press F6

7) F6 change Graph 2 for Quadratic plot

8) Repeat step 6

9) F6 change Graph 2 for Cubic

10) Repeat step 6

2) Which graph had a best fit for our set of data?

3) Work in Groups –

Find a polynomial function that best models each set of values.

8. Let  $x = 0$ .

**Life Expectancy**

Exact Age	Male (years)
5	70.5
10	65.6
15	60.6
20	55.9

9. Let  $x =$  the number of years since 1950.

**World Silver**

Year	Production (metric tons)
1950	6323
1955	9967
1960	7505
1965	8007