

Review: Fitting a Line to Data

The table below shows the temperature for various elevations. (Based on a temperature of 59°F at sea level.)

elevation (ft)	1,000	5,000	10,000	15,000	20,000	30,000
temperature ($^{\circ}\text{F}$)	56	41	23	5	-15	-47

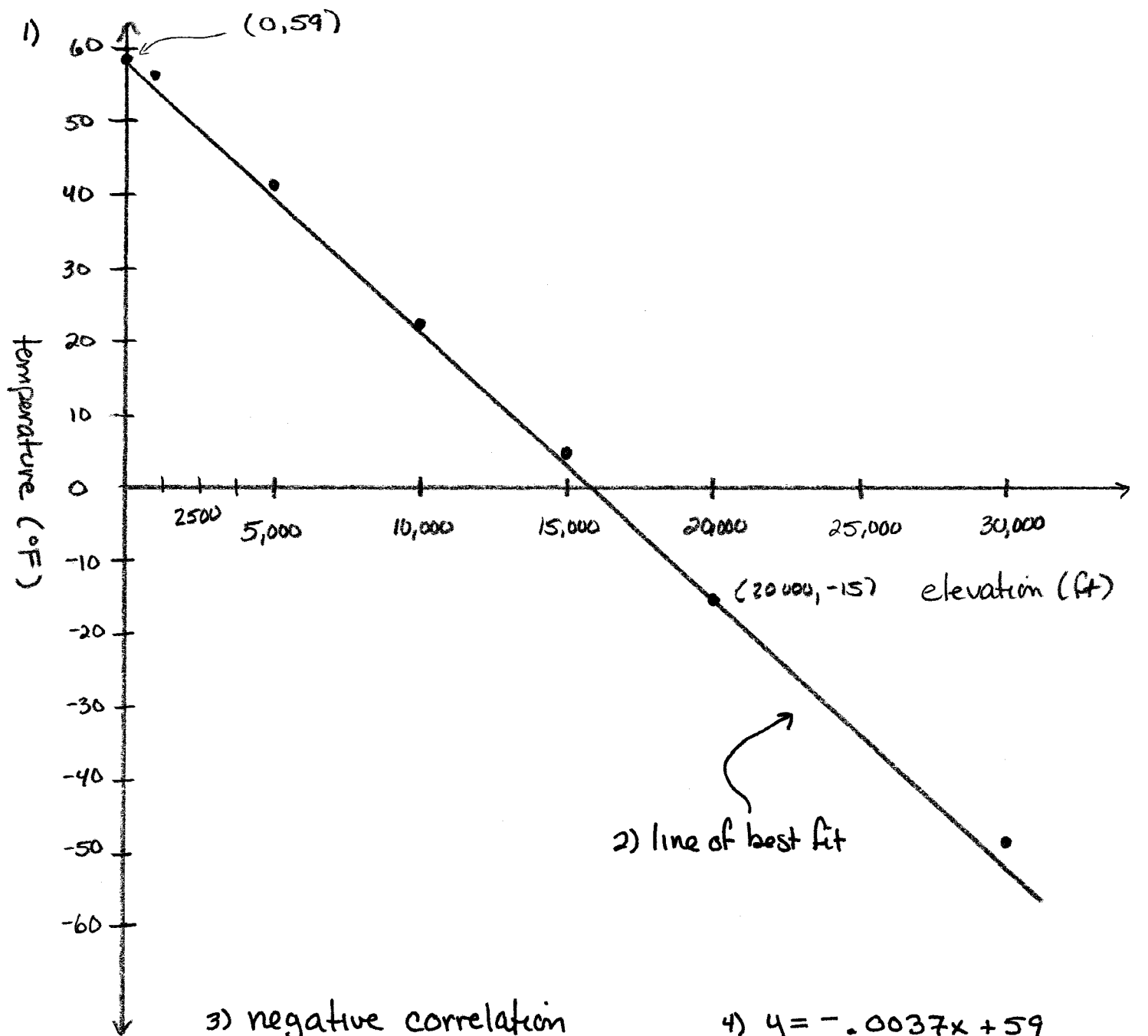
- 1) Plot the data in the table on a scatter plot. Let the x-axis represent the elevation. Let the y-axis represent the temp.
- 2) On the scatter plot, draw the line that best approximates the data.
- 3) Describe the correlation shown on the scatter plot.
- 4) Write the equation of the line of best fit.

Using the equation of the line of best fit, answer the following questions.

- 5) What will the temperature be at an elevation of 40,000 ft?
- 6) if the temperature is 15°F , then what is the elevation?



Answers:



4) $y = -.0037x + 59$
points used: (0, 59)
(20,000, -15)

5) -89°F

6) 11,892 ft