**Crickets Chirping**

It is a well-known fact that crickets tend to chirp faster in warmer weather than they do in cooler weather. The following data shows the relationship between chirps per minute of some crickets and the corresponding temperature.

|  |  |
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| Chips per Minute | Temperature (in F°) |
| 20 | 89 |
| 16 | 72 |
| 20 | 93 |
| 18 | 84 |
| 1 | 81 |
| 16 | 75 |
| 15 | 70 |
| 1 | 82 |
| 15 | 69 |
| 17 | 83 |
| 16 | 81 |
| 17 | 84 |
| 14 | 77 |

1. Analyze the data. Determine which points are outliers. Suggest a possible explanation for the outliers.
2. Exclude the outliers and find a regression line to fit the remaining data points. Determine the strength and direction of the correlation. Use your regression line to predict the temperature if a cricket chirps at a rate of 21 chirps per minute.
3. Search the internet for information on the relationship between cricket chirps and temperature. Find at least two different formulas. Compare the formulas you find on the internet with the equation of your trend line. Summarize your conclusions in a written report.