

Name:

Hour:

Date:

DATA ANALYSIS LAB 1.1

Effects of Temperature on Cricket Chirping

Temperature (° F)	Cricket Chirps (per min)
68	121
75	140
80	160
81	166
84	181
88	189
91	200
94	227

Can temperature be predicted by counting cricket chirps?

Many outdoors enthusiasts claim that air temperature (° F) can be estimated by adding the number 40 to the number of cricket chirps counted in 15 seconds. Is there scientific evidence to support this idea?

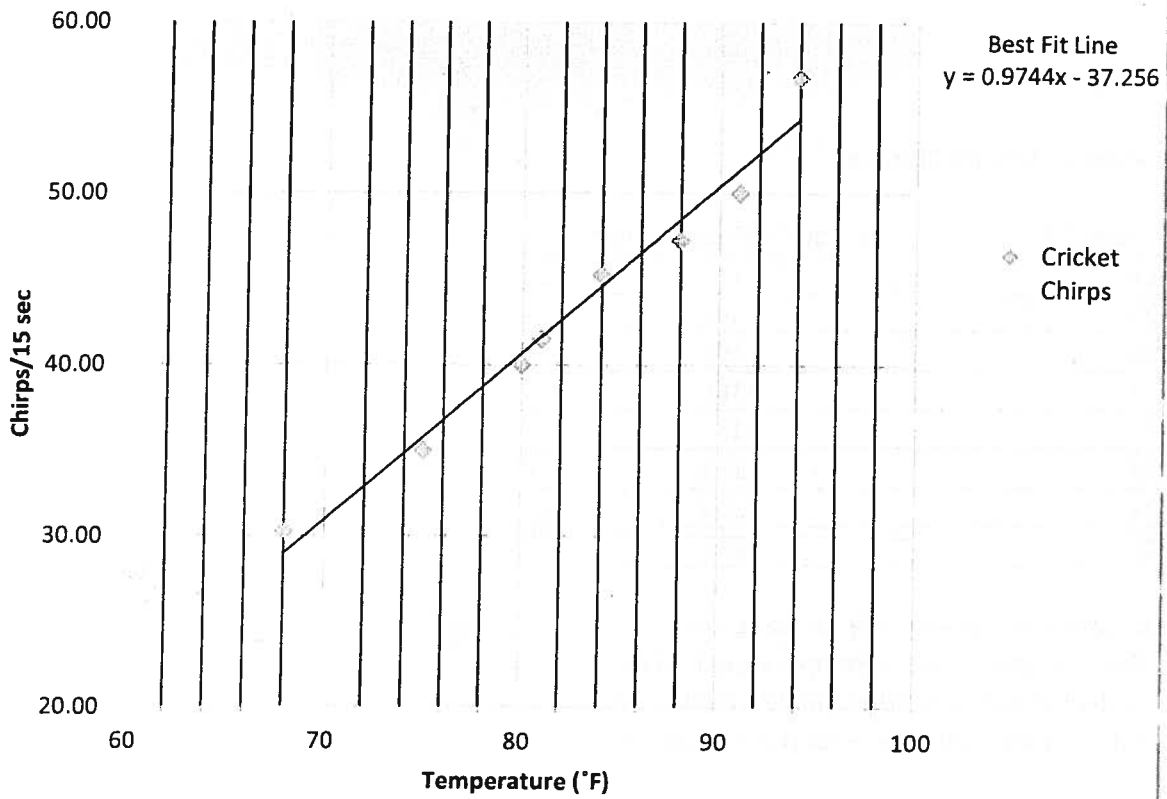
Data and Observations

A group of students collected the data at the right. The students concluded that the claim is correct.

Think Critically

1. **Convert** the number of chirps per minute to the number of chirps per 15 seconds.
2. **Plot** the number of chirps per 15-second interval versus Fahrenheit temperature using a line graph. Draw the best-fit line on your line graph.
3. **Write** the equation for the best-fit line.
4. **Peer review** Do the results support the students' conclusion? Explain.

Effects of Temperature on Chirping



Graph 1: The data represent the number of cricket chirps per fifteen seconds for various Fahrenheit temperatures.