

Name: _____ Hour _____ Date: _____

Crickets and Thermometers

Did you know that crickets are thermometers? It's true! The number of chirps that a cricket makes in a minute depends on the temperature so if you time the cricket you can tell how hot it is! Here's a table that will help you:

Chirps per minute	Temperature (in Fahrenheit degrees)
40	50°F
60	
80	60°F
100	65°F
120	
140	

Oops! We've left out some of the entries in the table. But that's OK – you can figure those out for yourself. (Hint: the relationship between chirps and temperature is *linear*.)

1) Fill in the missing entries in the table above.

This table will work as long as the temperature is divisible by 5, but most of the time it won't be. What do you do then? Well, you could make a graph...

2) Using graph paper, graph the points on the table above identifying the x and y axis and units

Now can you tell from the graph what the temperature is if the cricket is chirping 58 times per minute? (Hint: it might help if you connected the points on your graph with a line.)

3) If the cricket is chirping 58 times per minute, what is the temperature? _____

4) If the temperature is 82°F, how many chirps would you expect per minute? _____

That was easy! But what if you're out in a field sometime with a bunch of crickets and you've left your graph behind? How will you know what the temperature is? How about a formula that will convert from chirps to degrees? It's easier to remember a formula than to remember to carry a graph around.

Write this information on your graph paper

A. How you could figure out the temperature by counting the number of chirps in a minute.

B. Write a formula that gives the number of chirps per minute as a function of the temperature in degrees Fahrenheit.

(Attach graph to this paper)