

Predict the Temperature with Cricket Chirps

Learn to use a cricket as a thermometer!

Here are some useful websites:

[The Old Farmer's Almanac](#)

[Library of Congress](#)

[Scientific American](#)

Formula for Fahrenheit

$$x + 40 = F$$

where x is the number of chirps in 14 seconds and F is the temperature in Fahrenheit

Formula for Celsius (centigrade)

$$x / 3 + 4 = C$$

where x is the number of chirps in 25 seconds and C is the temperature in Celsius

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If you can hear crickets, follow these directions...

Directions to predict the temperature with cricket chirps:

1. Count the number of cricket chirps in 14 seconds. Record your answer.
2. Repeat two more times.
3. Find the average number of chirps. (Add the three numbers together and divide by 3.)
4. Use this number for x in the Fahrenheit formula. (See above.)
5. Determine the temperature.
6. Count the number of cricket chirps in 25 seconds. Record your answer
7. Repeat two more times.
8. Find the average number of chirps. (Add the three numbers together and divide by 3.)
9. Use this number for x in the Celsius formula. (See above.)
10. Determine the temperature.

If you **cannot** hear crickets, follow these directions...

Directions to predict the number of cricket chirps with temperature:

1. Look up the current temperature in Fahrenheit.
2. Use this number for F in the Fahrenheit formula. (See above.)
3. Determine the number of cricket chirps there would be in 14 seconds by solving for x . (Use the additive inverse.)
4. Look up the current temperature in Celsius.
5. Use this number for C in the Celsius formula. (See above.)
6. Determine the number of cricket chirps there would be in 25 seconds by solving for x . (Use the additive inverse *first, then* the multiplicative inverse.)

WORKSHEET

Fahrenheit

Number of cricket chirps in 14 seconds _____

Number of cricket chirps in 14 seconds _____

Number of cricket chirps in 14 seconds _____

Average number in 14 seconds (x) _____

$$x + 40 = F$$

$$F =$$

Celsius

Number of cricket chirps in 25 seconds _____

Number of cricket chirps in 25 seconds _____

Number of cricket chirps in 25 seconds _____

Average number in 25 seconds (x) _____

$$x / 3 + 4 = C$$

$$C =$$