

A2.S.7: Logarithmic Regression: Determine the function for the regression model, using appropriate technology, and use the regression function to interpolate/extrapolate from data

- 1 The accompanying table shows wind speed and the corresponding wind chill factor when the air temperature is 10°F .

Wind Speed (mi/h) x	Wind Chill Factor ($^{\circ}\text{F}$) y
4	3
5	1
12	-5
16	-7
22	-10
31	-12

Write the logarithmic regression equation for this set of data, rounding coefficients to the *nearest ten thousandth*. Using this equation, find the wind chill factor, to the *nearest degree*, when the wind speed is 50 miles per hour. Based on your equation, if the wind chill factor is 0, what is the wind speed, to the *nearest mile per hour*?

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Answer Section

1 ANS:

$$y = 13.0134 - 7.3135 \ln x, -16, 6$$

PTS: 6

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