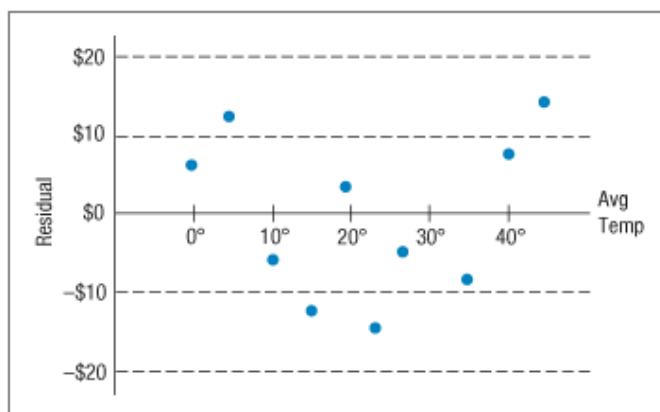33. HEATING After keeping track of his heating expenses for several winters, a homeowner in the U.S. believes he can estimate the monthly cost from the average daily Fahrenheit temperature by using the model $\widehat{Cost} = 133 - 2.13Temp$. The residuals plot for his data is shown.

a. Interpret the slope of the line in this context.

b. Interpret the y-intercept of the line in this context.

c. During months when the temperature stays around freezing, would you expect cost predictions based on this model to be accurate, too low, or too high? Explain.

d. What heating cost does the model predict for a month that averages 10°F?

e. During one of the months on which the model was based, the temperature did average 10°F. What were the actual heating costs for that month?

f. Do you think the homeowner should use this model? Explain.

g. Would this model be more successful if the temperature were expressed in