11. [6 points] Suppose that $C = h(T)$ is the daily cost, in dollars, to heat a certain house if the average outside temperature that day is T degrees Fahrenheit (°F). The function $h(T)$ is invertible and differentiable.

a. [3 points] Complete the following sentence to give a practical interpretation of $h'(40) = -0.1$.

If one day the average outside temperature is 40°F *and the next day it is* 37°F, ...

Solution: "then the daily cost to heat the house will have increased by about 0.3 dollars."

b. [3 points] Complete the following sentence to give a practical interpretation of $(h^{-1})'(3.6) = -8$.

If the cost to heat the house increased from \$3.60 *on one day to* \$3.70 *the next day, ...*

Solution: "then the temperature must have decreased by approximately 0.8°F."