

Exercise 55

Let $H(t)$ be the daily cost (in dollars) to heat an office building when the outside temperature is t degrees Fahrenheit.

- (a) What is the meaning of $H'(58)$? What are its units?
 - (b) Would you expect $H'(58)$ to be positive or negative? Explain.
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Solution

- (a) $H'(58)$ is the rate that the daily cost increases with respect to temperature when the temperature is 58 degrees Fahrenheit. Its units are dollars per Fahrenheit degree.
- (b) $H'(58)$ is negative because the hotter it is outside, the less you have to use the heater.