Quiz 6

Name: _____

1. Find the value of $f'(3)$ for the function $f(t) = -6t + 1$. Show your work or explain your answer.

   Best solution: the derivative is the slope of the tangent line at $t = 3$. Since f is already a line, the derivative is just its slope, so $f'(3) = -6$. Other solution:

$$\begin{aligned} f'(3) &= \lim_{h \to 0} \frac{f(3+h) - f(3)}{h} \\ &= \lim_{h \to 0} \frac{-6(3+h) + 1 - (-17)}{h} \\ &= \lim_{h \to 0} \frac{-6h}{h} \\ &= -6. \end{aligned}$$