

$$-6x^2 + 6x - 4 \quad x = 5$$

$$f'(x) = \lim_{h \rightarrow 0} \frac{6(x+h)^2 + 6(x+h) - 4 - (-6x^2 + 6x - 4)}{h}$$

$$\lim_{h \rightarrow 0} \frac{-\cancel{6x^2} + 12hx + \cancel{6h^2} + \cancel{6x} + 6h - 4 + \cancel{6x^2} - \cancel{6x} + \cancel{4}}{h}$$

$$\frac{-12\cancel{h}x + \cancel{h}^2 + 6\cancel{h}}{\cancel{h}} = \boxed{-12x + 6}$$

$$\boxed{-12(5) + 6 = -54}$$