5.5 $\bigl(\lambda\,f\bigr)'(x) = \lim\limits_{h\to 0} \dfrac{\bigl(\lambda\,f\bigr)(x+h) - \bigl(\lambda\,f\bigr)(x)}{h} = \lim\limits_{h\to 0} \dfrac{\lambda\,f(x+h) - \lambda\,f(x)}{h}$

$$= \lim\limits_{h\to 0} \dfrac{\lambda\,\bigl(f(x+h) - f(x)\bigr)}{h} = \lambda\,\lim\limits_{h\to 0} \dfrac{f(x+h) - f(x)}{h} = \lambda\,f'(x)$$