Carentwe tack:

$$\lim_{x\to 0} \left[f(x) + g(x) \right] = \lim_{x\to 0} f(x) + \lim_{x\to 0} g(x)$$

$$\lim_{x\to 0} \left[f(x) \cdot f(x) \right] = \lim_{x\to 0} f(x) \cdot \lim_{x\to 0} f(x) = \left(\lim_{x\to 0} f(x) \right)^{2}$$