Find the limit or write “d.n.e.” if the limit does not exist.

1(1). \( \lim_{x \to 0} \sqrt{\sin(x^2)} = \)

2(1). \( \lim_{x \to -3} f(x) = -4 \) and \( \lim_{x \to -3} g(x) = 2. \)

\[ \lim_{x \to -3} \frac{4 - g(x)}{4 + f(x)} = \]

Recall that \( f'(x) = \lim_{h \to 0} \frac{f(x+h) - f(x)}{h} \).

3(3) \( f(x) = \sqrt{x} \). Find, using the definition of the derivative, \( f'(x) = \)