Exercise 1 [3 points]

Find \( \lim_{x \to 0} \frac{\sin 3x \sin x^2}{x^2 \sin 5x} = \) 

Exercise 2 [3 points]

Let \( f(x) = |x - 1| + |x + 2| \). Find \( f'(-2) \).

Exercise 3 [4 points]

Let \( g(x) = \sin x \) and \( f(x) = x \sin x \).

(a) Find \( g^{(34)}(x) \) and \( g^{(35)}(x) \)  

(b) Find \( f^{(35)}(x) \)