Exercise 1 [4 points]
Find \( \lim_{x \to 0} \frac{\sin 3x \sin x^2}{x^3 \tan 5x} = \)

Exercise 2 [4 points]
Let \( f(x) = |x - 1| + |x + 2| \).

1. \( f'_-(1) = \)

2. \( f'_+(1) = \)

3. \( f'_-(-2) = \)

4. \( f'_+(-2) = \)

5. [2 points] \( f'(x) = \)

Exercise 3 [2 points]
Let \( f(x) = x g(x^2) \), with \( g' \) and \( g'' \) exist for all \( x \).

1. \( f'(x) = \)

2. \( f''(x) = \)