Math 0110A Quiz 5

Instructor: Daniel Schäppi

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1. **(2 marks)** Compute the **second** derivative of the function:

$$f(x) = \frac{x^2 - 1}{x + 1}$$

2. **(3 marks)** Suppose that $y = f(x)$ satisfies the equation

$$\sqrt{x^2 + y^2 + 2} = x + 1$$

Compute the slope of the tangent line of the curve described by the equation above at the point $(x, y) = (1, -1)$. (Hint: you have to use implicit differentiation).