1. Consider the parametrized curve given by

\[ x(t) = e^t, \quad y(t) = t^2 + 2t. \]

Find the equation of the line tangent to the curve at the point where \( t = 0 \).

2. Compute the following limit

\[ \lim_{{x \to -4}} \frac{\sin(\pi x)}{x^2 - 16}. \]