

## Quiz

Math 102, Term 172

NAME:

ID:

**Problem 1.** Find  $\lim_{n \rightarrow \infty} n \left[ \frac{1}{n^2+1^2} + \frac{1}{n^2+2^2} + \dots + \frac{1}{2n^2} \right]$

**Problem 2.** Find the equation of the tangent line of  $f(x) = \int_{\sin x}^{2e^x} \sqrt{4-t^2} dt$  at  $x = 0$ .