Fall 2023 Math 101, Sections 11-12
Quiz 2

Name: _____

Time limit: 15 minutes

Let $f : \mathbb{R} \to \mathbb{R}$ be a differentiable function such that

$$f(\pi) = \pi/2, \quad f(\pi^2) = 2 - \pi, \quad f'(\pi) = -5, \quad f'(\pi^2) = 3\,.$$

Find an equation for the tangent line to the graph of

$$y = \frac{x + f(x^2)}{\sin(f(x))}$$

at the point whose x-coordinate is π.