#3) \( y' + (\tan t)y = \sin t \quad y(\pi) = 0 \)

\( g(t) = \sin t \) is continuous everywhere

\( p(t) = \tan t \)

\( \tan t \) is \underline{NOT} \ cont. at \( k\pi/2 \quad k = \pm 1, \pm 3, \pm 5, \ldots \)

so the largest interval containing \( t_0 = \pi \) such that both \( p \) and \( g \) are continuous is

\( \left( \frac{\pi}{2}, \frac{3\pi}{2} \right) \)