$\dfrac{dy}{dx} = \dfrac{8\sin(x)}{\sin(y)}$, $y(0) = \dfrac{\pi}{2}$. So $\int \sin(y)\,dy = \int 8\sin(x)\,dx \quad \Leftrightarrow$
$-\cos y = -8\cos x + C \quad \Leftrightarrow \quad \cos(y) = 8\cos(x) - C$. From the initial condition, we need $\cos\frac{\pi}{2} = 8\cos 0 - C \quad \Rightarrow \quad 0 = 8 - C \quad \Rightarrow \quad C = 8$, so the solution is $\cos y = 8\cos x - 8$. Note that we cannot take $\cos^{-1}$ of both sides, since that would unnecessarily restrict the solution to the case where $0 \le y \le \pi$. Instead we plot the graph using Maple's `plots[implicitplot]` or Mathematica's `Plot[Evaluate[··· ]]`.