[10] 1.) Given that $y(t) = \frac{1}{t}$ and $y(t) = t^{\frac{3}{2}}$ are solutions to $2t^2y'' + ty' - 3y = 0$, state the general solution to this 2nd order homogeneous linear differential equation:

[10] 2.) Solve: $y' = y\cos(x)$.