PR1: The solution of the initial value Problem:

$$t \ln t \frac{dy}{dt} + \cos^2 y = 1 \;,\; y(e) = \frac{\pi}{4}$$

is given by:

a/ $\cot(y) - \ln(\ln|t|) = 1$

b) $\cot(y) + \ln|t| = 1$

c) $\cot(y) + \ln(\ln|t|) = 1$ X

d) $\cot(y) - \ln|t| = 1$

e) $-\cot(y) + \ln(\ln|t|) = 1$

Pb2: The solution of the DE: $y'' + 2y' + y = \cos^2 x - \sin^2 x$ is given by:

a/ $y = c_1 e^{-x} + c_2 x e^{-x} - \frac{3}{25}\cos 2x - \frac{4}{25}\sin 2x$

b/ $y = c_1 e^{-x} + c_2 x e^{-x} - \frac{3}{25}\cos 2x + \frac{4}{25}\sin 2x$ X

c) $y = c_1 e^{-x} + c_2 x e^{-x} - \frac{3}{25}\cos 2x + \frac{2}{25}\sin 2x$

d/ $y = c_1 e^{-x} + c_2 x e^{-x} - \frac{3}{25}\cos 2x + \frac{4}{25}\sin x$

e/ $y = c_1 e^{-x} + c_2 x e^{-x} - \frac{3}{25}\cos x + \frac{4}{25}\sin 2x$