Quiz 2:

Let $y_1 = 2sin4x$ and $y_2 = \sqrt{\pi} \tan^{-1} x$ are particular solutions of

$$y'' + e^x y' + (\cos x)y = e^{-x}$$

and

$$y'' + e^x y' + (\cos x)y = \sec x.$$

Find a particular solution of

$$y'' + e^x y' + (\cos x)y = \frac{3}{2} e^{-x} + 7 \sec x.$$