解　$y''+2y'+y=e^{-x}\ln x$

Characteristic equation　$\lambda^2+2\lambda+1=0, \lambda=-1$

齊次解　$y_h=Ae^{-x}+Bxe^{-x}$

$$W(e^{-x},xe^{-x})=\begin{vmatrix} e^{-x} & xe^{-x} \\ -e^{-x} & (1-x)e^{-x} \end{vmatrix}=e^{-2x}$$

$$y_p=-y_1\int\frac{y_2 r(x)/a_0(x)}{W(y_1,y_2)}dx+y_2\int\frac{y_1 r(x)/a_0(x)}{W(y_1,y_2)}dx=-e^{-x}\int x\ln x dx+xe^{-x}\int\ln x dx$$

$$=\frac{1}{4}x^2 e^{-x}(2\ln x-$$

General solution　$y=y_h+y_p$