Engineering Mathematics   Homework 1

1. $f(x) = \dfrac{(x^2+4x+13)(x-2)^2}{(x^2+3x+3)(x+1)^4}$, 求 $\dfrac{df(x)}{dx} = ?$

2. $\int (x^2+3x+3)\sin x\, dx = ?$ (使用分部積分)

3. $\dfrac{\partial^2 u(x,y)}{\partial x^2} + x\dfrac{\partial u(x,y)}{\partial y} = 0$

   問: 此方程式為＿＿階＿＿次＿＿D.E.