Quiz 5a   **Calculus 2**   **4/2/04**

Each problem is worth 5 points. For full credit provide proper justification for your answer.

1. Determine whether $y = 2\cos 4x$ is a solution to the differential equation $\dfrac{d^2 y}{dx^2} = -4y$.

2. Determine whether the function $y = xe^{-3x}$ is a solution to the differential equation $3y + y' = y/x$.