Quiz 2        Calc 2        4/2/2003

Each problem is worth 5 points. For full credit provide complete justification for your answers.

1. Determine whether \( y = e^{3x} \) is a solution to the differential equation \( y'' - 4y' + 3y = 0 \).

2. Determine whether \( y = x \sin x \) is a solution to the differential equation \( y'' + y = 2 \cos x \).