Quiz 3   **Calculus 1**   **2/17/2006**

Each problem is worth 5 points. Clear and complete justification is required for full credit.

1. Find the derivative of $y = \dfrac{x^2 + 4x + 3}{\sqrt{x}}$.

2. Find the derivative of $f(x) = e^x \sqrt{x}$.

3. Find the derivative of $y = \left(r^2 - 2r\right)e^r$.