

Show all work, including mental steps, in a clearly organized way that speaks for itself. Use proper mathematical notation, identifying expressions by their proper symbols (introducing them if necessary), and use arrows and equal signs when appropriate. **BOX** final short answers. Always simplify expressions.

$$\frac{dy}{dx} = x - y \quad y(x) = C e^{-x} + x - 1 \quad y(0) = 10$$

- Verify that $y(x)$ satisfies the given differential equation.
- Determine a value of the constant C so that $y(x)$ satisfies the given initial condition.
- Box for final result for $y(x)$. Then check that it satisfies the initial condition.

Organize your work as though you were playing professor.