Problem 1 (5 points)
Use substitution to evaluate the indefinite integral.
\[
\int e^{-4x} \frac{1}{x \sqrt{\ln x}} \, dx \quad \text{(B level)}
\]

Problem 2 (5 points)
Sketch the region enclosed by the given curves and find its area.
\[
y = 2x^2, \quad y = 4 + x^2 \quad \text{(C level)}
\]

Problem 3 (5 points)
Sketch the region enclosed by the given curves and find the volume of the solid obtained by rotating the region about the \(y\)-axis.
\[
x = y^2, \quad x = 2y \quad \text{(A level)}
\]

\(^1\)The quiz lasts 30 minutes.