

No books, notes or graphing calculators. Turn off your cell phones. Good luck!

- (5) 1. Determine whether the following integral is convergent or divergent, and evaluate it if it is convergent.

$$\int_0^3 \frac{1}{\sqrt[3]{t}} dt$$

- (5) 2. Find the coordinates of the center of mass of the uniform flat plate bounded by the  $x$ -axis, the graph of the function  $y = \ln x$  and the vertical line  $x = e$ .