Name:
Section:
Clear your desk of everything except pens, pencils and erasers. Show all your work. If you have a question raise your hand and I will come to you.

1. (3 points) What is the area of the region bounded by the graph of $y=e^{x}$ and the $x$-axis between $x=0$ and $x=\ln 2$ ?
2. (3 points) Evaluate the following integral.

$$
\int\left(\frac{1}{2}\right)^{\cos (x)} \sin (x) d x
$$

3. (4 points) Find the function $y=y(x)$ which satisfies the initial value problem

$$
\frac{d y}{d x}=\frac{\sin x}{2 y} \quad y(0)=-2
$$

