Name:


1. Determine the value(s) of $x$ for which the following equation holds:

$$
\log _{12} x+\log _{12} 3=1
$$

2. Compute the indefinite integral:

$$
\int \frac{2 x}{e^{x^{2}}} d x
$$

3. Compute the integral:

$$
\int_{-1}^{1} \pi^{x} d x
$$

4. Compute the derivative of $f(x)=\frac{2^{x}}{3^{x}}$.
