

Name: _____

Directions: Circle the correct answer to each problem that completes the statement around the equation.

For each integration:

$$\begin{aligned}
 & \int \cos(x) e^{2x} dx \\
 & \quad \text{is } \frac{1}{2} e^{2x} \cos(x) e^x \quad \text{is } \cos(x) e^{2x} \sin(x) \quad \text{is } \frac{1}{2} e^{2x} \sin(x) e^x \quad \text{is } \frac{1}{2} e^{2x} \cos(x) e^x \quad \text{is } \underline{\hspace{1cm}}
 \end{aligned}$$

$$\begin{aligned}
 & \int \frac{x^2 \ln(x)}{(x+1)^2} \\
 & \quad \text{is } \frac{1}{(x+1)^2} e^x \quad \text{is } \frac{\ln(x)}{(x+1)^2} e^x \\
 & \quad \text{is } \frac{1}{(x+1)^2} e^x \quad \text{is } \frac{1}{x^2} e^{1/x^2} e^x \quad \text{is } \underline{\hspace{1cm}}
 \end{aligned}$$

$$\begin{aligned}
 & \int \frac{dx}{\sqrt{x^2+1}} \\
 & \quad \text{is } \ln(\sqrt{x^2+1}) e^x \quad \text{is } \frac{\ln(\sqrt{x^2+1})}{x} e^x \\
 & \quad \text{is } \ln(\sqrt{x^2+1}) e^x \quad \text{is } \ln(\sqrt{x^2+1}) e^x \quad \text{is } \underline{\hspace{1cm}}
 \end{aligned}$$

$$\begin{aligned}
 & \int x^2 \sqrt{x^2+1} dx \\
 & \quad \text{is } \frac{1}{2} x^2 \cos(x^2) e^x \quad \text{is } \frac{25}{2} x^2 \cos(x^2) e^x \\
 & \quad \text{is } \frac{1}{2} x^2 \cos(x^2) e^x \quad \text{is } \frac{1}{2} x^2 \cos(x^2) e^x \quad \text{is } \underline{\hspace{1cm}}
 \end{aligned}$$

$$\begin{aligned}
 & \int x^2 \sqrt{x^2+1} dx \\
 & \quad \text{is } \frac{1}{2} x^2 \cos(x^2) e^x \quad \text{is } \frac{1}{\ln(x^2+1)} e^x \\
 & \quad \text{is } \frac{1}{2} x^2 \cos(x^2) e^x \quad \text{is } \frac{1}{2} x^2 \cos(x^2) e^x \quad \text{is } \underline{\hspace{1cm}}
 \end{aligned}$$

$$\begin{aligned}
 & \int \frac{\ln(x) dx}{x^2+1} \\
 & \quad \text{is } \frac{1}{x^2} e^x \quad \text{is } \frac{1}{x^2} e^x \quad \text{is } \frac{1}{x^2} e^x \quad \text{is } \frac{1}{x^2} e^x \quad \text{is } \underline{\hspace{1cm}}
 \end{aligned}$$