

Integration By Parts

$$\int u \, dv = uv - \int v \, du$$

Directions: Evaluate each integral.

1. $\int xe^{2x} dx$

2. $\int \ln x \, dx$

$$3. \int \frac{\ln x}{x^2} dx$$

$$4. \int 2x \ln(x+1) dx$$

$$5. \int_0^{\frac{\pi}{6}} \sec^2 x \ln(\cos x) dx$$

$$6. \int_0^{\pi} x^2 \sin x \, dx$$

$$7. \int_0^{\pi} e^x \sin x \, dx$$