MATH 130A Review: Integration by parts

Facts to Know

Integration by parts
\[ \int_a^b u \, dv = \]

Examples

1. Calculate \( \int_0^1 xe^{2x} \, dx \)
2. Calculate \[ \int_0^1 (x^2 + 1)e^{-x} \, dx \]

3. Calculate \[ \int_0^1 \tan^{-1} x \, dx \]