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
$$\int_0^1 \tan^{-1} x \, dx$$