Calculus with Analytic Geometry II

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1 Integration by Parts Worksheet

I. Evaluate $\int xe^x dx$

II. Evaluate $\int \ln(x)dx$

III. Evaluate $\int e^x \cos(x)dx$

IV. Find the antiderivative of $\arctan(x)$.

V. Find the reduction formula for $\int \cos^n(x)dx$, where $n \geq 2$.

VI. Find the reduction formula for $\int \tan^n(x)dx$, where $n \geq 2$.