

Section 7.1: Integration by Parts

Example: Compute the following integrals.

A) $\int x e^{2x} dx$

$$\text{B) } \int x^2 e^{2x} dx$$

Example: Compute the following integrals.

$$\text{A) } \int x e^{2x} dx$$

$$\text{B) } \int x^2 e^{2x} dx$$

$$\text{C) } \int (x^3 + 6x) \sin(2x) dx$$

$$D) \int \ln(x) dx$$

$$E) \int x^2 (\ln(x))^2 dx$$

$$F) \int x \tan^2(x) dx$$

$$G) \int \arctan(x) dx$$

$$\text{H) } \int \sin(x) \cos(3x) dx$$

$$I) \int \sin(x)e^{3x} dx$$

$$\text{J) } \int x^3 \sin(x^2) dx$$