Integration by Parts

Integration By Parts

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

1. Find the integral.
(similar to p.533 #12)

$$\int \left(x^2 \sin x\right) dx$$

2. Find the integral.
(similar to p.533 #12)

$$\int \left(7xe^x\right) dx$$

3. Find the integral.
(similar to p.533 #16)

$$\int \left(x^2 \ln x\right) dx$$

4. Find the integral.
(similar to p.533 #16)

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

5. Find the integral.
(similar to p.533 #34)

$$\int (5 \arcsin x)\,dx$$

6. Solve the differential equation
(similar to p.533 #39-44)

$$y' = x \ln x$$

7. Use the tabular method to find the integral.
(similar to p.534 #61-66)

$$\int (x^4 e^x)\,dx$$

8. Use the tabular method to find the integral.
(similar to p.534 #61-66)

$$\int (x^2 \cos 3x)\,dx$$

9. Find the definite integral.
(similar to p.533 #34)

$$\int_0^1 (x^2 e^{-4x})\,dx$$