

Integration by parts 1

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Complete the following integrals by applying integration by parts once. Use the App to check your answers.

1. $\int x \sin x dx$

2. $\int x \ln x dx$

3. $\int x^2 \ln x dx$

4. $\int x \cos 2x dx$

5. $\int x e^{-x} dx$

6. $\int_0^{\pi/2} x \sin x dx$ *Answer* [1]

7. $\int_2^4 x \ln x dx$ *Answer* $[14 \ln 2 - 3]$

8. $\int_1^3 x^2 \ln x dx$ *Answer* [7]

9. $\int_0^{\pi/4} x \cos 2x dx$ *Answer* $[\frac{\pi}{8} - \frac{1}{4}]$

10. $\int_0^2 x e^{-x} dx$ *Answer* $[1 - \frac{3}{e^2}]$