

Worksheet
2/25/2019

Compute the following integrals using integration by parts.

(a) $\int_0^\pi e^{-x} \cos x dx$ with $u = \cos x$ and $dv = e^{-x} dx$.

(b) $\int x^2 e^x dx$ with $u = x^2$ and $dv = e^x dx$.

Give the partial fraction decomposition for the following functions.

(a) $\frac{2}{x^2-2x-8}$

(b) $\frac{2}{x(x^2-4x+4)}$