

Worksheet  
3/4/2019

Compute the following integrals using integration by parts.

(a)  $\int_{1/2}^{\sqrt{3}/2} \arcsin x dx$  with  $u = \arcsin x$  and  $dv = dx$ .

(b)  $\int e^{3x} \cos 2x dx$  with  $u = \cos 2x$  and  $dv = e^{3x} dx$ .

Give the partial fraction decomposition for the following functions.

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

(b)  $\frac{x^4-1}{x^2-4x+4}$