

INTEGRATION BY PARTS

$\int f(x)dx$, where $f(x)$ is a product of functions, where $\int f(x)dx = \int u dv$

MEMORIZE: $\int u dv = uv - \int v du$

- 1) Choose u and dv
- 2) Find du , the derivative of u
- 3) Find v the antiderivative of dv , $v = \int dv$
- 4) Use formula and then complete the simpler integral

HINTS FOR CHOOSING u and dv :

- 1) Look for u as the part of the product that simplifies when you take the derivative.
- 2) OR look for u as being the part that is “impossible” to find the antiderivative of.