

INTEGRATION BY PARTS EXERCISES

1. $\int 5xe^x dx$

2. $\int (x+1)e^x dx$

3. $\int xe^{-x} dx$

4. $\int x \ln x dx$

5. If a product has a marginal cost given by $\frac{dC}{dx} = (x+1)^2 \ln(x+1)$ and a fixed cost given by $C(0) = \$99$, then find the cost function $C(x)$. Round, as needed, to the nearest cent.