

$$\begin{aligned}
\int_{-1}^2 (x^2 - 2x) dx &= \left| \begin{array}{l} f(x)x^2 - 2x \\ \int f(x)dx = \frac{x^3}{3} - x^2 + C \\ F(x) = \frac{x^3}{3} - x^2 \end{array} \right| = \left[ \frac{x^3}{3} - x^2 \right]_{-1}^2 = \\
&= \left( \frac{2^3}{3} - 2^2 \right) - \left( \frac{(-1)^3}{3} - (-1)^2 \right) = \left( \frac{8}{3} - 4 \right) - \left( -\frac{1}{3} - 1 \right) = -\frac{4}{3} + \frac{4}{3} = 0
\end{aligned}$$