

Tarea

$$\textcircled{1} \int_{-1}^2 (x^3 - 2x)$$

$$\int_{-1}^2 \frac{x^4}{4} - 2 \Big|_{-1}^2$$

$$\left(\frac{2^4}{4} - 2 \right) - \left(\frac{-1^4}{4} - 2 \right) = 4.25$$

$$\left(\frac{2^4}{4} - 2 \frac{-2^2}{2} \right) - \left(\frac{-1^4}{4} - 2 \frac{-1^2}{2} \right) = -0.75$$

$$\textcircled{2} \int_1^9 \sqrt{x} \, dx = x^{1/2}$$

$$\frac{x^{1/2+1}}{\frac{1}{2}+1} \Big|_1^9 = \frac{x^{3/2}}{\frac{1}{2}+1} - \left(\frac{1^{3/2}}{\frac{1}{2}+1} \right) =$$

$$17.3333$$

$$\textcircled{3} \int (u+2)(u-2) du$$

$$\begin{array}{r} u^2 + 2u \\ + 2u - 4 \\ \hline u^2 - 4 \end{array}$$

$$\int u^2 du - 4 \int du$$

$$\frac{u^3}{3} - 4u + C$$

$$\textcircled{4} \int_1^9 \frac{x-1}{\sqrt{x}} dx \rightarrow \frac{9x^2}{4} - \left(\frac{1^2}{4}\right) = 20$$

$$(x-1)(x^{-1/2})$$

$$-1 \int x^{-1/2} - \frac{1}{2} \int x^{-1/2}$$

$$-1 \frac{x^{1/2}}{1/2} - \frac{1}{2} \frac{x^{1/2}}{1/2} = \frac{x^2}{2} - \frac{x^2}{4}$$

$$\textcircled{5} \int \frac{v^3 - 3v^3}{v^4} dv$$

$$\int v^3 - 3 \int v^3 +$$

$$\frac{v^4}{4} - 3 \frac{v^4}{4} - \frac{v^3}{-3} + C$$

$$\textcircled{6} \int_0^{\pi/4} \sec \theta \tan \theta d\theta$$

$$(-\cos \pi/4 - \cos 0) (\sec^2 \pi/4) - (\sec^2 0)$$

$$-1.9999 - 51.7575 = 49.7576$$

$$\textcircled{7} \int \frac{u^2 - 1}{u^2 + 1} du$$

$$-1 \int u^2 + 1 \int u^2 + 1$$

$$-\frac{u^3}{3} - \frac{u^3}{3} + 1$$