

Hoja de Trabajo sobre Integral Definida

Resuelva las siguientes integrales completando los espacios correspondientes:

Ejercicio 1:

$$\int_0^3 (3x^2 - 4x + 1)dx$$

$$= \frac{3x^3}{3} - \frac{4x^2}{2} + x \Big|_0^3$$

$$= x^3 - 2x^2 + x \Big|_0^3$$

$$= \left[()^3 - 2()^2 + (3) \right] - \left[(0)^3 - 2(0)^2 + (0) \right]$$

$$= \left[- 2() + 3 \right]$$

$$= - + 3$$

$$=$$

Ejercicio 2:

$$\int_1^4 \sqrt{x}(2+x)dx$$

$$\int_1^4 x^{1/2}(2+x)dx$$

$$\int_1^4 (2x^{1/2} + x^{3/2})dx$$

$$= \frac{4x^{3/2}}{3} + \frac{2x^{5/2}}{5} \Big|_1^4$$

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$$= \left[\frac{(4)^{3/2}}{3} + \frac{(4)^{5/2}}{5} \right] - \left[\frac{4(1)^{3/2}}{3} + \frac{2(1)^{5/2}}{5} \right]$$

$$= \left[\frac{8}{3} + \frac{32}{5} \right] - \left[\frac{4}{3} + \frac{2}{5} \right]$$

$$= \frac{16}{15}$$

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