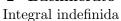


Departamento de Matemáticas 2º Bachillerato





1. p38e01 - Calcula los siguientes límites:

(a)
$$\int 4x^6 \cdot dx$$

Sol:
$$\frac{4x^7}{7} + K$$

(h)
$$\int \frac{d^2y}{9x^2}$$

(b)
$$\int 6x^3 + 8x^2 + 3 \cdot dx$$

(h)
$$\int \frac{2}{9x^2+1} \cdot dx$$

Sol:
$$\frac{2 \tan{(3x)}}{3} + K$$

Sol: $\frac{5 \tan{(2x)}}{2} + K$

(i)
$$\int \frac{1}{1-4x^2} \cdot dx$$

(c)
$$\int \sqrt{2}\sqrt{x} \cdot dx$$

Sol:
$$\frac{2\sqrt{2}x^{\frac{3}{2}}}{3} + K$$

Sol: $\frac{3x^4}{2} + \frac{8x^3}{3} + 3x +$

Sol:
$$-\frac{\log\left(x-\frac{1}{2}\right)}{4}$$
 + $\frac{\log\left(x+\frac{1}{2}\right)}{4}$ + K

(d)
$$\int \frac{1}{\sqrt[5]{x}} \cdot dx$$
 (j) $\int \frac{1}{x^2 + 1} dx$

Sol:
$$\frac{5x^{\frac{4}{5}}}{4} + K$$

$$(j) \quad \int \frac{1}{x^2+4} \cdot dx$$

Sol:
$$\frac{\operatorname{atan}\left(\frac{x}{2}\right)}{2} + K$$

(e)
$$\int \frac{\sqrt[3]{5}\sqrt[3]{x^2} + \sqrt{3}\sqrt{x^3}}{\sqrt{2}\sqrt{x}} \cdot dx$$
 (k) $\int \frac{2x-3}{x^2-3x+9} \cdot dx$

Sol:
$$\frac{\sqrt{2}\left(\frac{6\sqrt[3]{5}\sqrt{x}\sqrt[3]{x^2}}{7} + \frac{\sqrt{3}\sqrt{x}\sqrt{x^3}}{2}\right)}{2}$$

Sol:
$$\log (x^2 - 3x + 9) + K$$

(f)
$$\int \frac{1}{x-1} \cdot dx$$

Sol:
$$\log(x-1) + K$$

(g)
$$\int \frac{5}{4x^2+1} \cdot dx$$

Sol:
$$e^{x^2} + K$$

(l) $\int 2e^{x^2}x \cdot dx$

(m)
$$\int \frac{1}{x-4} \cdot dx$$

Sol:
$$\log(x-4) + K$$

(n)
$$\int \frac{1}{(x-4)^3} \cdot dx$$

Sol:
$$-\frac{1}{2x^2 - 16x + 32} + K$$

$$(\tilde{\mathbf{n}}) \int e^{5x} \cdot dx$$

Sol:
$$\frac{e^{5x}}{5} + K$$

(o)
$$\int \frac{\sqrt{x}+x}{x^2} \cdot dx$$

Sol:
$$\log(x) - \frac{2}{\sqrt{x}} + K$$

(p)
$$\int \frac{\log(x)^3}{x} \cdot dx$$

Sol:
$$\frac{\log(x)^4}{4} + K$$

(q)
$$\int \frac{\sin(\sqrt{x})}{\sqrt{x}} \cdot dx$$

Sol:
$$-2\cos(\sqrt{x}) + K$$

(r)
$$\int e^{9+(-2)x} \cdot dx$$

Sol:
$$-\frac{e^{9-2x}}{2} + K$$