

Nombre de alumno:

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Nombre del profesor:

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Nombre del trabajo:

Ejercicios

PASIÓN POR EDUCAR

Materia:

Matemáticas aplicadas

Grado: 6to Cuatrimestre

Grupo: Único

Erik Algodoro Chantre Solis

① $e^x \partial x \quad C+C$

② $e^{5x+2} \times \partial x \quad F = 5x+2 \quad F' = 10x$
 $\frac{1}{5} e^{5x+2} \times \partial x$
 $\frac{1}{5} C e^{5x+2} + C$

③ $a 10x^2 + 2 \quad 3x \partial x \quad F = 10x^3 + 2 \quad F' = 30x$
 $\frac{10}{20} a 10x^2 + 2 \quad 3x \partial x \quad \frac{10}{20} \frac{a 10x^2 + C}{10a} + C$

④ $e^{\sqrt{x}} \frac{1}{\sqrt{x}} \partial x \quad F = \sqrt{x} \quad F' = \frac{1}{2} x^{-1/2}$
 $2 \int e^{\sqrt{x}} \frac{1}{\sqrt{x}} \partial x \quad 2 C \sqrt{x} + C$

⑤ $\frac{10x^2}{12x^3+2} \partial x \quad F = 12x^3 + 2 \quad F' = 36x^2$

$\frac{10}{36} \frac{x^2}{12x^3+2} \partial x \quad \frac{10}{36} \ln |12x^3+2| + C$

⑥ $10^4 x^2 + 2x^2 \partial x \quad F = 4x^3 + 2 \quad F' = 12x^2$

$\frac{1}{12} (10^4 x^2 + 2x^2) \partial x \quad \frac{1}{12} a \frac{10^4 x^2 + 2x^2 + C}{12}$

⑦ $e^{4x^2+1} 3x \partial x \quad F = 4x^2 + 1 \quad F' = 8x$

$\frac{3}{8} (e^{4x^2+1} 3x \partial x) \quad \frac{3}{8} C e^{4x^2+1} 3x + C$

⑧ $(15x^2 - 3) \partial x \quad F = 15x^2 - 3 \quad F' = 30x$

$\frac{1}{30} (15x^2 - 3) \partial x \quad \frac{1}{30} a \frac{15x^2 - 3 + C}{10}$

⑨ $e^{x^5+2} 3x^4 \partial x \quad F = x^5 + 2 \quad F' = 5x^4$
 $\frac{1}{5} C e^{x^5+2} + C$

⑩ $3x^2+1 \times \partial x \quad F = 3x^2+1 \quad F' = 6x$

$\frac{1}{6} (3x^2+1) \partial x \quad \frac{1}{6} a \frac{3x^2+1 + C}{3}$

⑪ $\frac{3x^5}{2x^6-10} \partial x \quad F = 2x^6 - 10 \quad F' = 12x^5$

$\frac{3}{12} \frac{3x^5}{2x^6-10} \partial x \quad \frac{3}{12} \ln |2x^6-10| + C$

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$$(12) \int (4x^{10} + 2) x^9 dx \quad f = 4x^{10} + 2 \quad f' = 40x^9$$
$$\frac{1}{40} \int (4x^{10} + 2) x^9 dx \quad \frac{1}{40} (4x^{10} + 2) x^9 + C$$

$$(13) \frac{8x^5}{3x^6 + 1} dy \quad u = 3x^6 + 1 \quad f' = 18x^5$$

$$\frac{8}{18} \frac{8x^5}{3x^6 + 1} dx \quad \frac{8}{18} \ln|3x^6 + 1| + C$$

$$(14) 43x^2 + 1 x^3 dx \quad f = 3x^2 + 1 \quad f' = 6x$$
$$\frac{1}{6} \int (43x^2 + 1) x^3 dx \quad \frac{1}{6} (43x^2 + 1) x^3 + C$$

$$(15) cx^2 x dx \quad f = x^2 \quad f' = 2x$$
$$\frac{1}{2} \int cx^2 x dx \quad \frac{1}{2} cx^2 + C$$

$$(16) 3x^2 + 1 5x dx \quad f = x^2 + 1 \quad f' = 2x$$
$$\frac{1}{2} \int (3x^2 + 1) 5x dx \quad \frac{1}{2} \frac{3x^2 + 1}{\ln 3} + C$$

$$(17) 12x^{12} + 2 5x dx \quad f = 4x^2 + 2 \quad f' = 8x$$
$$\frac{1}{8} \int (12x^{12} + 2) 5x dx \quad \frac{1}{8} \frac{12x^{12} + 2}{\ln 2}$$