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**Nombre del trabajo:**

**Ejercicios**

PASIÓN POR EDUCAR

**Materia:**

**Matemáticas aplicadas**

**Grado: 6to Cuatrimestre**

**Grupo: Único**

Erik Algodas Chant... Sol's

①  $e^x \partial x \quad C+C$

②  $e^{5x+21} \times \partial x \quad F = 5x+21 \quad F' = 10x$   
 $\frac{1}{5} e^{5x+21} \times \partial x$   
 $\frac{1}{5} C e^{5x+21} x + C$

③  $a 10x^2 + 23x \partial x \quad F = 10x^2 + 23x \quad F' = 20x$   
 $\frac{10}{20} a 10x^2 + 23x \partial x \quad \frac{10}{20} \frac{a 10x^2 + C}{10a} + C$

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

$\frac{1}{12} (10^4 x^3 + 2x^2) \partial x \quad \frac{1}{12} a \frac{10^4 x^3 + 2x^2}{12} + C$

⑦  $e^{4x^2+11} 3x \partial x \quad F = 4x^2 + 11 \quad F' = 8x$

$\frac{3}{8} (e^{4x^2+11} 3x) \partial x \quad \frac{3}{8} C e^{4x^2+11} 3x + C$

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

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

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

$\frac{1}{6} (3x^2+1) \partial x \quad \frac{1}{6} a \frac{3x^2+1}{18} + C$

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

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

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

$$(14) 43x^2 + 1 x^3 dx \quad u = 43x^2 + 1 \quad f' = 86x$$
$$\frac{1}{86} \int (43x^2 + 1) x^3 dx \quad \frac{1}{86} (43x^2 + 1) x^3 + C$$

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

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

$$(17) 12x^{1/2} + 2 5x dx \quad f = 4x^{1/2} + 2 \quad f' = 2x^{-1/2}$$
$$\frac{1}{8} \int (12x^{1/2} + 2) 5x dx \quad \frac{1}{8} \frac{12x^{3/2} + 2x}{1/2}$$