



## GUIA DE ESTUDIO

### CALCULO INTEGRAL

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$\int 9dx =$	$\int 2x^5dx =$	$\int(6x^5 - 10x^2 + 8x)dx =$
$\int 2dx =$	$\int x^{10}dx =$	$\int(2x^7 - 4x^3 + 11x)dx =$
$\int 50dx =$	$\int 8x^{40}dx =$	$\int(23x^5 - 41x^2 + 17)dx =$
$\int \frac{3}{4}dx =$	$\int 12x^{11}dx =$	$\int(5x^8 + 4x^3 + x)dx =$
$\int -7dx =$	$\int 6x^5dx =$	$\int(x^4 - 4x^7 + x)dx =$
$\int -8dx =$	$\int 11x^7dx =$	$\int(15x^5 - 6x^2 + 4x)dx =$

$\int \frac{1}{4}x^2dx =$	$\int \sqrt[7]{x^2}dx =$	$\int \frac{9}{x^3}dx =$	$\int \frac{2}{3\sqrt[7]{x^3}} =$
$\int \frac{3}{4}x^3dx =$	$\int \sqrt[5]{x^4}dx =$	$\int \frac{7}{x^4}dx =$	$\int \frac{9}{2\sqrt[5]{x^3}} =$
$\int \frac{3}{7}x^2dx =$	$\int \sqrt[9]{x^2}dx =$	$\int \frac{5}{x^8}dx =$	$\int \frac{9}{2\sqrt[7]{x^2}} =$



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Integrales definidas.

$\int_4^7 (8x^2 - 7x + 20)dx =$	$\int_2^5 (2 - 4x)dx =$	$\int_0^3 11dx =$
$\int_1^9 (9x^2 + 15x + 7)dx =$	$\int_{-2}^3 (10x + 1)dx =$	$\int_{-2}^2 30dx =$
$\int_0^7 (7x^2 - 10x + 13)dx =$	$\int_2^9 (2x^3 - 1)dx =$	$\int_3^5 18dx =$
$\int_{-2}^2 (-5x + 2)dx =$	$\int_2^3 (2x + 12)dx =$	$\int_0^2 3x^4dx =$
$\int_1^3 (3x^4 - 5x^3 + 2x - 7)dx =$	$\int_2^3 (7x - 5)dx =$	$\int_2^4 5x^3dx =$

Resolver las siguientes áreas bajo la curva:

- 1.-  $Y = 2x^2$  con  $x_1 = 1, x_2 = 2$
- 2.-  $Y = -3x^2 + 2$  con  $x_1 = 0, x_2 = 3$
- 3.-  $Y = 12$  con  $x_1 = 1, x_2 = 5$
- 4.-  $Y = 8$  con  $x_1 = -1, x_2 = 3$



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Resolver las siguientes integrales indefinidas de polinomios.

$\int (8X + 3)dx =$	$\int (6X + 3)7x^2dx =$	$\int (7x + 4)^2dx =$	$\int (6x + 73)^{14}dx =$
$\int (4X + 5)dx =$	$\int (9X + 30)6x^2dx =$	$\int (8x - 12)^2dx =$	$\int (8x + 3)^{20}dx =$
$\int (4X - 3)dx =$	$\int (10X + 8)2x^2dx =$	$\int (40x + 34)^2dx =$	$\int (4x + 15)^{20}dx =$
$\int (7X - 10)dx =$	$\int (4X + 3)5x^3dx =$	$\int (19 - 3x)^2dx =$	$\int (4x + 3)^8dx =$

$\int (4x + 3)^{20} 5 dx =$	$\int (4x^2 + 3)^{20} x dx =$	$\int (8x + 3)^2 x dx =$	$\int (2x + 8) (4x - 11) dx =$
$\int (8x + 3)^{20} 10 dx =$	$\int (12x^2 + 3)^2 3x dx =$	$\int (4x - 10)^2 x dx =$	$\int (4x + 3) (2x + 1) dx =$
$\int (4x + 9)^{20} 9 dx =$	$\int (4x^2 + 15)^{10} 4x dx =$	$\int (9x + 29)^2 x dx =$	$\int (4x - 3) (2x - 1) dx =$
$\int (4x - 3)^{20} 12 dx =$	$\int (21x^3 + 3)^{21} 3x^2 dx =$	$\int (2x + 1)^2 x dx =$	$\int (8x - 5) (20x + 4) dx =$
$\int (6x + 17)^5 2 dx =$	$\int (4x^4 + 3)^{32} 3x^3 dx =$	$\int (4x + 3)^2 x dx =$	$\int (40x + 9) (9x - 10) dx =$

Integrales indefinidas con división.

$\int \frac{16x^5 + 4x^4 - 12x^7}{4x^3} dx =$	$\int \frac{dx}{(2x - 7)^8} =$	$\int \frac{dx}{\sqrt[9]{(10x - 8)^5}} =$
$\int \frac{4x^8 + 8x^6 - 2x^{10}}{4x^4} dx =$	$\int \frac{dx}{(4x + 7)^{15}} =$	$\int \frac{dx}{\sqrt[7]{(15x + 2)^3}} =$
$\int \frac{2x^{15} + 10x^{40} - 3x^8}{2x^8} dx =$	$\int \frac{dx}{(10x - 7)^2} =$	$\int \frac{dx}{\sqrt[7]{(17x - 11)^4}} =$
$\int \frac{15x^5 + 45x^4 - 60x^7}{30x^4} dx =$	$\int \frac{dx}{(4 - 7x)^3} =$	$\int \frac{dx}{\sqrt[3]{(2x + 72)^2}} =$



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Utilizando du/u

$\int \frac{dx}{7x-2} =$	$\int \frac{4x^3 dx}{5x^4-2} =$	$\int \frac{6x+6}{3x^2+6x-23} dx =$
$\int \frac{dx}{8x+13} =$	$\int \frac{10x^2 dx}{11-2x^3} =$	$\int \frac{24x^2-9}{8x^3-9x-4} dx =$
$\int \frac{dx}{3-4x} =$	$\int \frac{3x dx}{2x^2+3} =$	$\int \frac{20x^4+11}{4x^5+11x+15} dx =$
$\int \frac{dx}{10-12x} =$	$\int \frac{5x^3 dx}{8-3x^4} =$	$\int \frac{10x+13}{5x^2+13x-2} dx =$

Integrales trigonométricas Directas.

$\int \sin 2x dx =$	$\int \cos 2x dx =$	$\int \sec^2 48x dx =$	$\int \csc^2 10x dx =$	$\int \sec 5x \tan 5x dx =$
$\int \sin 3x dx =$	$\int \cos 8x dx =$	$\int \sec^2 43x dx =$	$\int \csc^2 20x dx =$	$\int \sec 8x \tan 8x dx =$
$\int \sin 11x dx =$	$\int \cos 12x dx =$	$\int \sec^2 38x dx =$	$\int \csc^2 30x dx =$	$\int \sec 3x \tan 3x dx =$
$\int \sin 13x dx =$	$\int \cos 16x dx =$	$\int \sec^2 33x dx =$	$\int \csc^2 40x dx =$	$\int \sec 9x \tan 9x dx =$
$\int \sin 17x dx =$	$\int \cos 20x dx =$	$\int \sec^2 28x dx =$	$\int \csc^2 50x dx =$	$\int \sec 4x \tan 4x dx =$

$\int \csc 8x \cot 8x dx =$	$\int \csc 29x dx =$	$\int \sec 2x dx =$	$\int \cot 3x dx =$	$\int \tan 7x dx =$
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$\int \csc 2x \cot 2x dx =$	$\int \csc 92x dx =$	$\int \sec 4x dx =$	$\int \cot 6x dx =$	$\int \tan 14x dx =$
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Resolver las siguientes integrales trigonométricas recíprocas.

$\int \frac{dx}{\sqrt{81-25x^2}} =$	$\int \frac{dx}{121x^2+9} =$	$\int \frac{dx}{4x\sqrt{16x^2-9}} =$	$\int \frac{dx}{841-100x^2} =$	$\int \frac{dx}{x^2-2} =$	$\int \frac{dx}{\sqrt{4x^2-1}} =$
$\int \frac{dx}{\sqrt{16-49x^2}} =$	$\int \frac{dx}{4x^2+13} =$	$\int \frac{dx}{3x\sqrt{9x^2-25}} =$	$\int \frac{dx}{729-784x^2} =$	$\int \frac{dx}{9x^2-4} =$	$\int \frac{dx}{\sqrt{x^2-16}} =$
$\int \frac{dx}{\sqrt{25-121x^2}} =$	$\int \frac{dx}{196x^2+4} =$	$\int \frac{dx}{x\sqrt{x^2-121}} =$	$\int \frac{dx}{169-9x^2} =$	$\int \frac{dx}{16x^2-9} =$	$\int \frac{dx}{\sqrt{9x^2-4}} =$
$\int \frac{dx}{\sqrt{49-144x^2}} =$	$\int \frac{dx}{225x^2+16} =$	$\int \frac{dx}{6x\sqrt{36x^2-16}} =$	$\int \frac{dx}{144-10x^2} =$	$\int \frac{dx}{25x^2-1} =$	$\int \frac{dx}{\sqrt{49x^2-25}} =$
$\int \frac{dx}{\sqrt{100-225x^2}} =$	$\int \frac{dx}{100x^2+25} =$	$\int \frac{dx}{7x\sqrt{49x^2-4}} =$	$\int \frac{dx}{81-x^2} =$	$\int \frac{dx}{36x^2-25} =$	$\int \frac{dx}{\sqrt{36x^2-81}} =$

Resolver las Integrales logarítmicas y exponenciales.

$\int e^{-5x} dx =$	$\int e^{2x^3+7} 6x^2 dx =$	$\int (e^{16x} - 17x^{10} - 11) dx =$	$\int (13e^{2x} + 2)^2 dx =$
$\int e^{7x/2} dx =$	$\int e^{5x^4-8} x^3 dx =$	$\int (e^{23x} + 42) dx =$	$\int (9e^{37x} - 14)^2 dx =$
$\int e^{x/50} dx =$	$\int e^{3x^5-9} 2x^4 dx =$	$\int (\frac{3}{4}x + e^{-4x}) dx =$	$\int (5e^{76x} - 17)^2 dx =$

Resolver las integrales utilizando integración por partes.

$\int 10x \operatorname{sen} 8x dx =$	$\int 11x \operatorname{csc}^2 7x dx =$	$\int 15xe^{8x} dx =$
$\int 9x \operatorname{cos} 11x dx =$	$\int 15x \operatorname{sec}^2 2x dx =$	$\int 9xe^{100x} dx =$



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$\int 14x \cos 7x \, dx =$	$\int 17x \csc^2 4x \, dx =$	$\int 24xe^{13x} \, dx =$
$\int 20x \sin 45x \, dx =$	$\int 21x \sec^2 20x \, dx =$	$\int 36xe^{62x} \, dx =$