

integrate  $x^{14}(x^5+1)^{1/3}$



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Assuming the principal root | Use [the real-valued root](#) instead

Indefinite integral:

Step-by-step solution

$$\int x^{14} \sqrt[3]{x^5 + 1} dx = \frac{3}{700} (x^5 + 1)^{4/3} (14x^{10} - 12x^5 + 9) + \text{constant}$$



integrate (x^3\*(1+2\*log(x))\*log(x))/(3+x^2\*log(x))^2



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Assuming "log" is the natural logarithm | Use [the base 10 logarithm](#) instead

Indefinite integral:

Step-by-step solution

$$\int \frac{x^3 (1 + 2 \log(x)) \log(x)}{(3 + x^2 \log(x))^2} dx = \log(x^2 \log(x) + 3) + \frac{3}{x^2 \log(x) + 3} + \text{constant}$$

[Open code](#) 

log(x) is the natural logarithm

differentiate  $(\cos(3x - \pi/6))^2$



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Derivative:

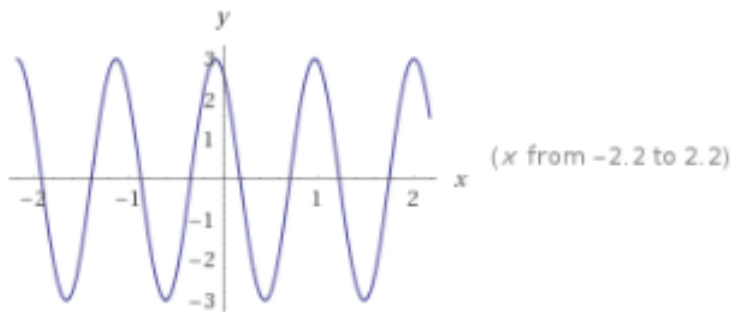
[Approximate form](#)

[Step-by-step solution](#)

$$\frac{d}{dx} \left( \cos^2 \left( 3x - \frac{\pi}{6} \right) \right) = 6 \sin \left( \frac{\pi}{6} - 3x \right) \cos \left( \frac{\pi}{6} - 3x \right)$$

[Open code](#) 

Plots:



integrate abs(2\*sin(x)-sqrt(3))



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Input:

$$\int |2 \sin(x) - \sqrt{3}| dx$$

[Open code](#) 

$|z|$  is the absolute value of  $z$

Indefinite integral assuming all variables are real:

$$\int |2 \sin(x) - \sqrt{3}| dx = (\sqrt{3} x + 2 \cos(x)) \operatorname{sgn}(\sqrt{3} - 2 \sin(x)) + \text{constant}$$



$\operatorname{sgn}(x)$  is the sign of  $x$

Definite integral over a half-period:

$$\int_0^\pi |-\sqrt{3} + 2 \sin(x)| dx = \frac{\pi}{\sqrt{3}} \approx 1.8138$$

[More digits](#)



integrate abs(2\*sin(x)-sqrt(3)) (x,0,Pi/2)



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Definite integral:

[More digits](#)

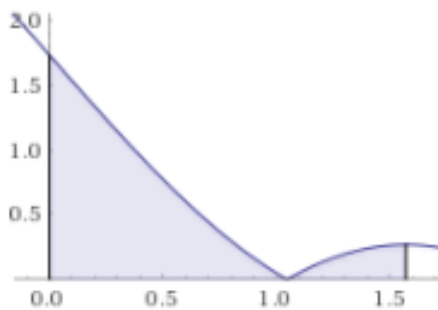
[Step-by-step solution](#)

$$\int_0^{\frac{\pi}{2}} |2 \sin(x) - \sqrt{3}| dx = \frac{\pi}{2\sqrt{3}} \approx 0.90690$$

[Open code](#) 

|z| is the absolute value of z

Visual representation of the integral:



integrate 1/((x+1)\*sqrt(x^2+2\*x)) {x,-1-sqrt(2),-1-(2\*sqrt(3)/3)}



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Definite integral:

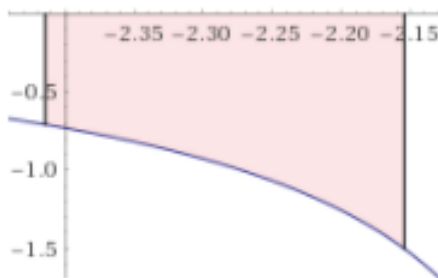
More digits

Step-by-step solution

$$\int_{-1-\sqrt{2}}^{-1-\frac{2\sqrt{3}}{3}} \frac{1}{(x+1)\sqrt{x^2+2x}} dx = -\frac{\pi}{12} \approx -0.26180$$

Open code

Visual representation of the integral:



Indefinite integral:

Step-by-step solution

$$\int \frac{1}{(x+1)\sqrt{x^2+2x}} dx = \frac{2\sqrt{x}\sqrt{x+2}\tan^{-1}\left(\frac{\sqrt{x}}{\sqrt{x+2}}\right)}{\sqrt{x(x+2)}} + \text{constant}$$



integrate  $\csc(x) \cot(x) / \sqrt{1 + \csc(x)}$



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Indefinite integral:

[Step-by-step solution](#)

$$\int \frac{\csc(x) \cot(x)}{\sqrt{1 + \csc(x)}} dx = -2 \sqrt{\csc(x) + 1} + \text{constant}$$

[Open code](#)

$\csc(x)$  is the cosecant function