$f(x) := \frac{\mathrm{sqrt}(x+1)}{x};$

$F(x) := int(f(x), x):$

$F(x)$

$$f := x \mapsto \frac{\sqrt{x+1}}{x}$$

$$2\sqrt{x+1} + \ln\left(\sqrt{x+1} - 1\right) - \ln\left(1 + \sqrt{x+1}\right) \quad \textbf{(1)}$$

$g(w) := -\frac{1}{4}(\tan(w)\cdot\sec(w) + \ln(\mathrm{abs}(\sec(w) + \tan(w))));$

$w := \arcsin(\mathrm{sqrt}(x+1)):$

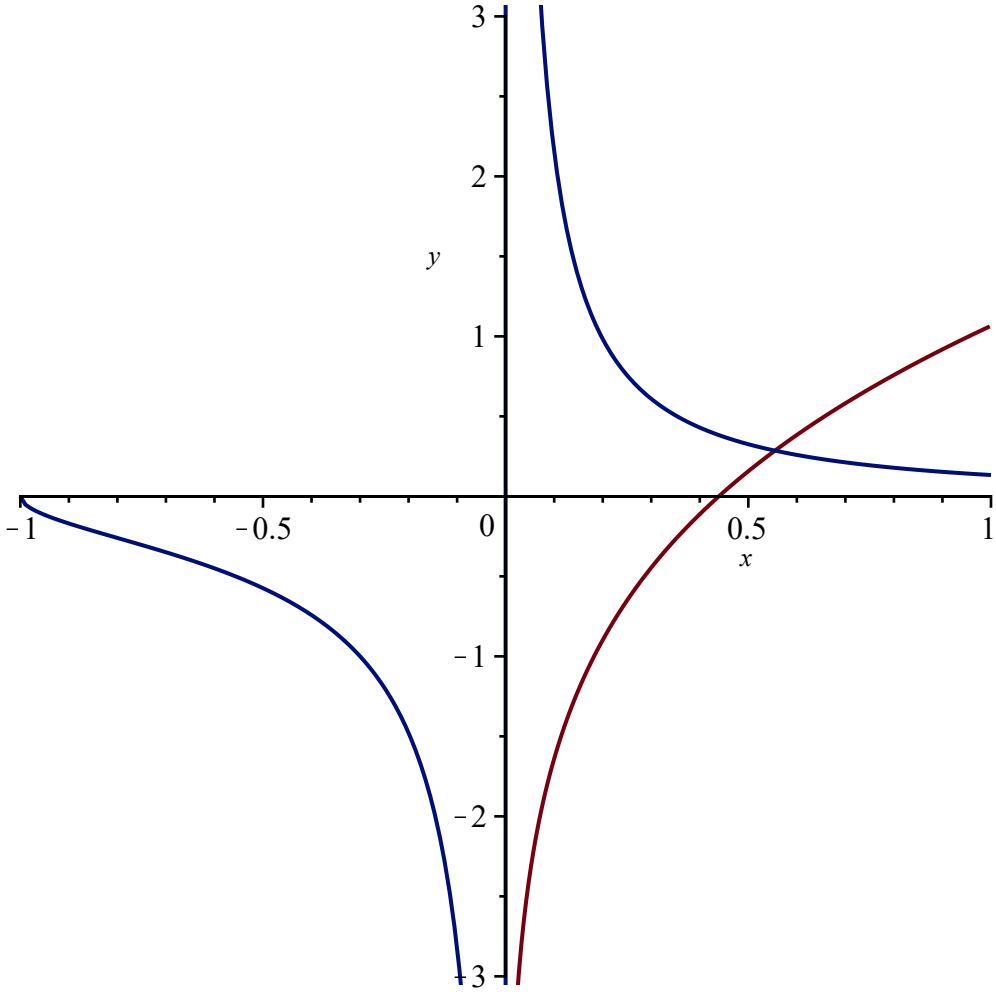
$G(x) := g(w):$

$G(x)$

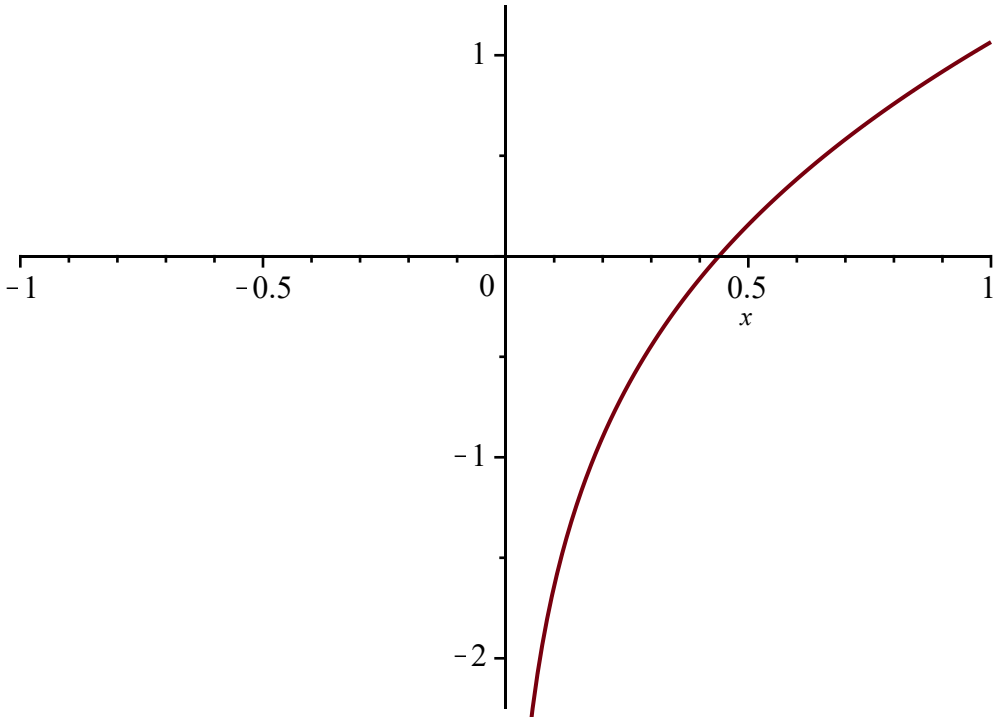
$$g := w \mapsto -\frac{\tan(w)\cdot\sec(w)}{4} - \frac{\ln(|\sec(w) + \tan(w)|)}{4}$$

$$\frac{\sqrt{x+1}}{4x} - \frac{\ln\left(\left|\frac{1}{\sqrt{-x}} + \frac{\sqrt{x+1}}{\sqrt{-x}}\right|\right)}{4} \quad \textbf{(2)}$$

$plot([F(x), G(x)], x = -1..1, y = -3..3)$



$Student[Calculus1][AntiderivativePlot](F(x), x = -1..1);$
$Student[Calculus1][AntiderivativePlot](G(x), x = -1..1)$



$\frac{\sqrt{x+1}}{x}$ An antiderivative of $\frac{\sqrt{x+1}}{x}$

A graph of $\frac{\sqrt{x+1}}{x} = 2\sqrt{x+1} + \ln\left(\sqrt{x+1} - 1\right) - \ln\left(1 + \sqrt{x+1}\right)$. 1

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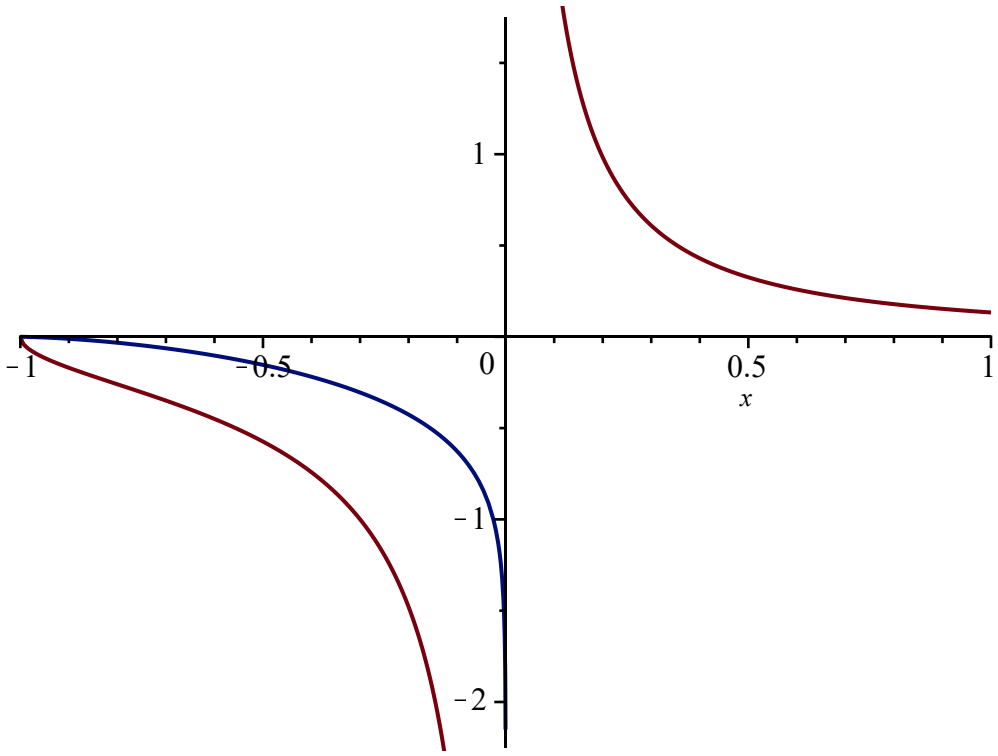

$\frac{\sqrt{x+1}}{x}$ An antiderivative of $\frac{\sqrt{x+1}}{x}$

A graph of $\frac{\sqrt{x+1}}{x} = \frac{1}{4}\ \frac{\sqrt{x+1}}{x} - \frac{1}{4}\ \ln\left(\left|\frac{1}{\sqrt{-x}} + \frac{\sqrt{x+1}}{\sqrt{-x}}\right|\right)$. The a