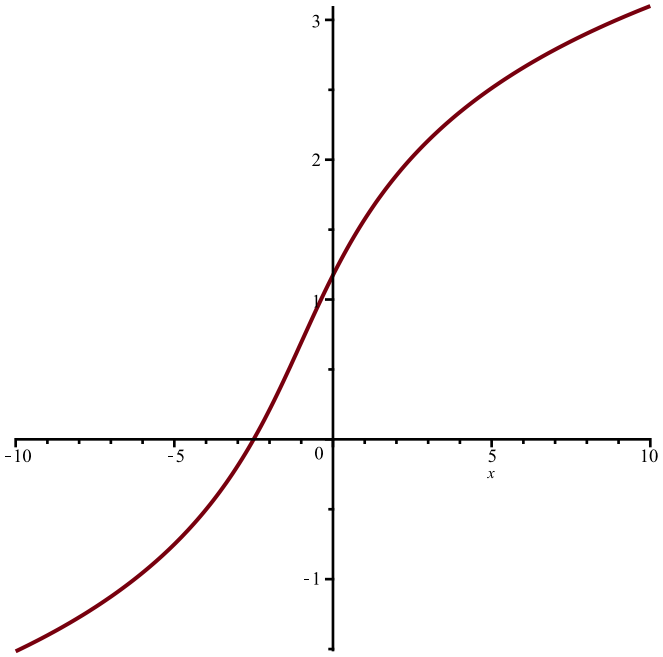
$f := x \to \ln(\mathrm{abs}(\mathrm{sqrt}(x^2 + 2 \cdot x + 5) + x + 1))$

$$f := x \mapsto \ln\left(\left|\sqrt{x^2 + 2 \cdot x + 5} + x + 1\right|\right) \quad \textbf{(1)}$$

$with(plots):$
$plot(f(x), x = -10..10)$



$?parfrac$

$f := x \to \dfrac{7}{(x+1)^3 \cdot (x-2)}$

$$f := x \mapsto \frac{7}{(x+1)^3 \cdot (x-2)} \quad \textbf{(2)}$$

$convert(f, parfrac)$

$$f \quad \textbf{(3)}$$

$convert(f(x), parfrac)$

$$-\frac{7}{9\,(x+1)^2} + \frac{7}{27\,(x-2)} - \frac{7}{27\,(x+1)} - \frac{7}{3\,(x+1)^3} \quad \textbf{(4)}$$