Mathematikgleichungen der Hyperbelfunktionen

Siehe: ***Handbook of mathematical functions, NBS, USA, Sec. 4.5***

$$F_{abu}(x/a) = [\tanh(x/a)+1] \,/\, [\tanh(x_u/a)+1] \qquad [1u]$$

$$F'_{abu}(x/a) = \tanh(x/a) \text{ mit } \tanh(x_u/a)=0 \qquad [2u]$$

$$F'_{abu}(x/a) = \frac{v^2(x/a) - u^2(x/a)}{a\,v^2(x/a)} \qquad [3u]$$

$$F'_{abu}(x/a) = \frac{4}{a\,[e^{x/a}+e^{-x/a}]^2} = \frac{1}{a\,\cosh^2(x/a)} \qquad [4u]$$