8. $\cosh(-x) = \frac{1}{2}\left[e^{-x} + e^{-(-x)}\right] = \frac{1}{2}\left(e^{-x} + e^{x}\right) = \frac{1}{2}\left(e^{x} + e^{-x}\right) = \cosh x$

9. $\cosh x + \sinh x = \frac{1}{2}\left(e^{x} + e^{-x}\right) + \frac{1}{2}\left(e^{x} - e^{-x}\right) = \frac{1}{2}(2e^{x}) = e^{x}$

32. $f(t) = \ln(\sinh t) \quad \Rightarrow \quad f'(t) = \dfrac{1}{\sinh t}\cosh t = \coth t$

33. $H(t) = \tanh(e^{t}) \quad \Rightarrow \quad H'(t) = \operatorname{sech}^2(e^{t}) \cdot e^{t} = e^{t}\operatorname{sech}^2(e^{t})$