

Math 248 - HW 5

24. For large negative values of x , $\sinh^{-1}(x) = \ln(x + \sqrt{x^2 + 1})$ can cause precision loss due to catastrophic cancellation.

Better alternative: $\sinh^{-1}(x) = -\ln(\sqrt{x^2 + 1} - x)$
 $\sqrt{x^2 + 1} - x$ is not close to 0 (unlike the original)