## 2023-02-03

Suppose $|z|<\epsilon_{\text {mach }}$, and we want to compute $x=1-\sqrt{1-z}$. What is the relative error between the true value of $x$ and the floating point approximation $\hat{x}$ computed by
$\mathrm{x}=1.0-\operatorname{sqrt}(1.0-z)$

