

The component functions $\frac{t - \textcolor{red}{1}}{t + \textcolor{red}{1}}$, $\sin t$, and $\ln(\textcolor{red}{4} - t^2)$ are all defined when $t \neq -\textcolor{red}{1}$ and $\textcolor{red}{4} - t^2 > 0 \Rightarrow -\textcolor{red}{2} < t < \textcolor{red}{2}$, so the domain of $\mathbf{r}$ is $(-\textcolor{red}{2}, -\textcolor{red}{1}) \cup (-\textcolor{red}{1}, \textcolor{red}{2})$.