

$$\begin{aligned}
& \neg(\forall \varepsilon > 0)(\exists \delta > 0)(\forall x_1 \in \mathbf{X})(\forall x_2 \in \mathbf{X})(|x_1 - x_2| < \delta \Rightarrow |f(x_1) - f(x_2)| < \varepsilon) = \\
& = (\exists \varepsilon > 0)(\forall \delta > 0)(\exists x_1 \in \mathbf{X})(\exists x_2 \in \mathbf{X}) \neg(|x_1 - x_2| < \delta \Rightarrow |f(x_1) - f(x_2)| < \varepsilon) = \\
& = (\exists \varepsilon > 0)(\forall \delta > 0)(\exists x_1 \in \mathbf{X})(\exists x_2 \in \mathbf{X})(|x_1 - x_2| < \delta \wedge \neg(|f(x_1) - f(x_2)| < \varepsilon)) = \\
& = (\exists \varepsilon > 0)(\forall \delta > 0)(\exists x_1 \in \mathbf{X})(\exists x_2 \in \mathbf{X})(|x_1 - x_2| < \delta \wedge |f(x_1) - f(x_2)| \geq \varepsilon)
\end{aligned}$$