

For a family of sets $\{X_i\}_1^23$, consider $Y := \cup_{i=1}^23X_i$.
Let $F : \mathbb{Z} \rightarrow \mathbb{R}$ be a mapping defined by

$$F(n) := \sqrt{(\max n, 10)}, \tag{1}$$

$$\tag{2}$$

and define $z = F(\sharp Y)$, which is not meaningful.