

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

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

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