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- For each $x \in X$, the *unique* $y \in Y$ such that $(x, y) \in G$ is denoted by $f(x)$ and is called *the image of x under f* .

- For convenience, we write $f : \mathbb{R} \longrightarrow \mathbb{R}$, $f(x) = x^2$ to represent the function $f = (\mathbb{R}, \mathbb{R}, G)$ where $G = \{(x, y) \in \mathbb{R}^2 : y = x^2\}$.

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 - ◇ Sometimes, instead of $f|_{[0, \infty)}$, we simply write f .

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- a real number $2 \in \mathbb{R}$
- a constant function $2 : \mathbb{R} \longrightarrow \mathbb{R}, 2(x) = 2$
- a multiplication operator $2 : C(-\infty, \infty) \longrightarrow C(-\infty, \infty), 2[f] = 2 \cdot f$