

1.57: Image

Let X and Y be sets, f be the function $f: X \rightarrow Y$, and x be some member of X . Then the **image** of x under f , denoted $f(x)$, is the unique member y of Y that f associates with x .

The **image** of a subset $A \subseteq X$ under f is the subset of Y defined by $f[A] = \{y \in Y \mid y = f(x) \text{ for some } x \in A\}$.

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