Why

The range need not equal the codomain; though it, like every other image, is a subset of the codomain.

Definition

The function maps to domain *on* to the codomain if the range and codomain are equal; in this case we call the function *onto*. This language suggests that every element of the codomain is used by the function. It means that for each element of the codomain, we can find an element of the domain whose result is that first element of the codomain.

We also call the function *surjective*.

Notation

Let $f : A \rightarrow B$. Using prior notation, we can state that f is onto by writing $f(A) = B$.

Surjective Functions

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Functions

↓

Relations

↓

Ordered Pairs

↓

Unordered Pairs

↓

Set Specification

↓

Set Inclusion

↓

Standardized Accounts

Definitions   Accounts

Deductions   Quantified Statements

Logical Statements

↓

Statements

Identities   Sets

Names

Objects   Letters