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## restriction of a function

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## Definition

Let  $f: X \to Y$  be a function from a set X to a set Y. If A is a subset of X, then the restriction of f to A is the function

$$f|_A \colon A \to Y$$
  
 $x \mapsto f(x).$ 

Some authors write  $f \upharpoonright A$  instead of  $f|_A$ .

## **Properties**

If  $A \subseteq X$ , and  $B \subseteq Y$ , then

$$(f|_A)^{-1}(B) = A \cap f^{-1}(B).$$