

## Answer on Question #75634 – Math – Discrete Mathematics

### Question

Let  $f$  be the function from  $\{a, b, c, d\}$  to  $\{1, 2, 3\}$  defined by  $f(a) = 3$ ,  $f(b) = 2$ ,  $f(c) = 1$ , and  $f(d) = 3$ . Is  $f$  an onto function? .

### Solution

Note that  $f$  is an onto function because for each element in the codomain  $Y = \{1, 2, 3\}$  there exists at least one element in the domain  $X = \{a, b, c, d\}$  such that  $f(x) = y$ .

**Answer:**  $f$  is an onto function.