

Answer on Question #41471, Math, Algebra

Determine if the following is a function or not

The set of ordered pairs $\{(animal, zebra), (bird, parrot), (flower, rose), (tree, elm)\}$ from the set $\{animal, bird, tree, flower\}$ to the set $\{zebra, parrot, rose, elm\}$.

Two Important Things that make an ordered pair function is

1. Every element in X is related to some element in Y (the relationship in this case is the element from X is the category for the element from Y).

We say that the function covers X (relates every element of it).

(But if some elements of Y are not related to at all, which is fine.)

2. A function is single valued. It will not give back 2 or more results for the same input.

$$X = \{animal, bird, tree, flower\} = \{x_1, x_2, x_3, x_4\}$$

$$Y = \{zebra, parrot, rose, elm\} = \{y_1, y_2, y_3, y_4\}$$

Since these two conditions are executed then the set of ordered pairs $\{(x_1, y_1), (x_2, y_2), (x_3, y_4), (x_4, y_3)\}$ you mentioned is a function.