FUNCTIONS 3: QUIZ SOLUTIONS

A relation is defined by this set of values:

$$A = [(3a;\ 2-a);\ (a-2);\ a^2].$$

Determine whether the relation is a one-to-one function, a many-to-one function, or not a function, for the different values of a in Questions 1, 2, 3 and 4.

Question 1

If a = 3, then $A = (9;\ -1);\ (1;\ 9]$. This is a one-to-one function.

Question 2

If a = -1, then $A = (-3;\ 3);\ (-3;\ 1]$. This is not a function.

Question 3

If a = -2, then $A = (-6;\ 4);\ (-4;\ 4]$. This is a many-to-one function.

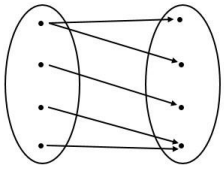
Question 4

If a = 1, then $A = (3;\ 2);\ (-1;\ 1]$. This is a one-to-one function.

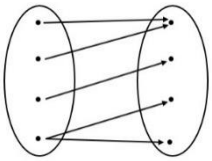
Question 5

Which of the following diagrams represents a one-to-one function:

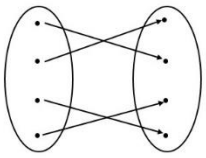
A.



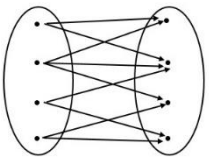
B.



C.



D.



Solution

C is a one-to-one function. A, B and D are not functions.