Chapter 1

Functions and Graphs

Review Exercise Solution

Review Exercise 1.310

Instruction

Is it true or false that a function is always one-to-one?

Solution

A function is one-to-one if $f(x_1) \neq f(x_2)$ if $x_1 \neq x_2$. The function $f(x) = x$ is an example of a function that is one-to-one. An example of a function that is'nt one-to-one is the function $f(x) = x^2$, for which $f(1) = f(-1) = 1$. We conlude that it is false to say that a function is always one-to-one.

Answer

False.