y(x)= |x-3| ; x = 0, 1, 2, 3, 4, 5, 6

The domain is all the *x*-values, and the range is all the *y*-values.

We begin by looking for *x*-values which make this function undefined. There aren't such values. No matter what value of *x* is chosen, the function always yields a well defined value for *y*. Therefore, we say that the domain of this function is the set of all real numbers.

Then we determine if there are any *y*-values which can never be achieved as output values. A close examination of the function tells us that there are.

y(x) is the absolute value (modulus) of (x-3). The absolute value of y(x) is always either positive or zero, but never negative.

Answer:

domain: x (-∞, +∞)

range: [0, +∞)