

Conditions

If $f = (1, 2), (2, 3), (3, 4), (4, 5)$,
 $g = (1, -2), (3, -3), (5, -5)$, and
 $h = (1, 0), (2, 1), (3, 2)$,

find the following and state the domain:

$f + g$

Solution

We can find the following only for those values of these functions, for which they exist.

It's obvious, that these are the points 1 and 3, because for points 2 and 4 we have no value for g , for point 5 we have no value for f . The domain of the function is a set of all values for which it is exist. That's why:

$$f + g(1) = 2 + (-2) = 0; f + g(3) = 4 + (-3) = 1. \text{The domain of } f + g \text{ is } 1 \text{ and } 3$$