Question #73563, Math / Calculus | for completion

Find two level curves of the function f(x,y)= (x+y)/(x-y) , x is not equal to y and sketch them

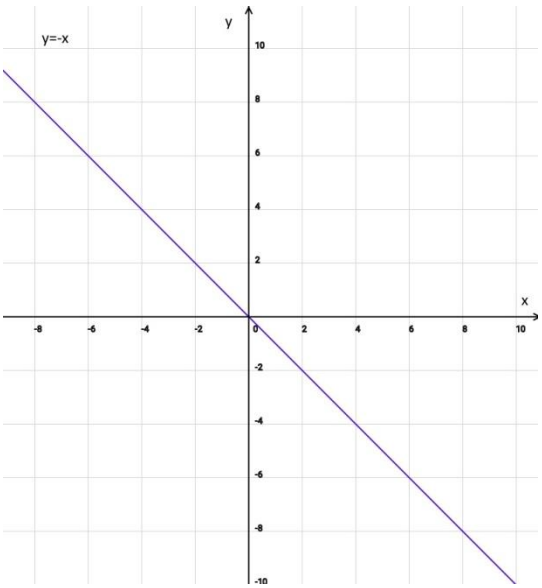
Solution

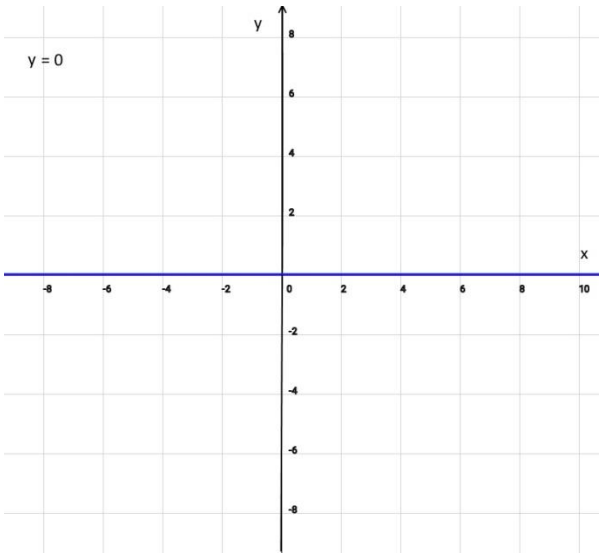
$$f(x,y) = \frac{x+y}{x-y}$$

Let's pick values for f and write the respective functions.

$f(x,y)$	**Function**
0	$0 = \frac{x+y}{x-y} \rightarrow x+y=0 \rightarrow y=-x$
1	$1 = \frac{x+y}{x-y} \rightarrow x+y=x-y \rightarrow y=0$

Now, we graph these lines on the same graph.





Answer:

$$y = -x$$

$$y = 0$$