

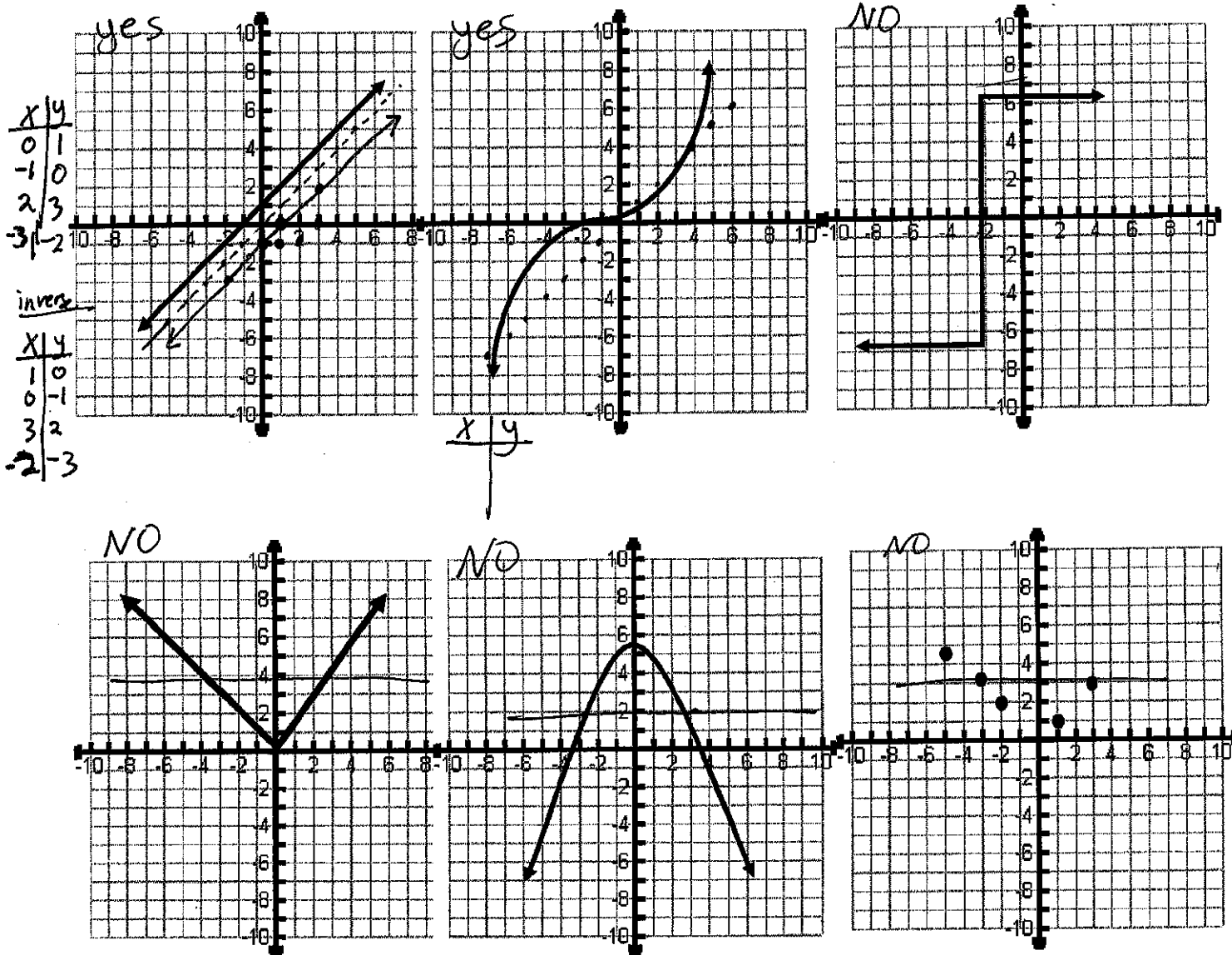
* the ~~the~~ inverse will be a function if the original function passes the horizontal line test (only touches in one point)

Graphing Inverses Worksheet

Name: Key

1. Inverse functions are symmetric over what line? $y=x$

2. Which of the following graphs will have an inverse that is a function?



3. If the domain of $f(x)$ is $(3, 4, 5)$ and the range is $(1, 2, 3)$, what is the domain and range of $f^{-1}(x)$?

$f(x) =$

x	y
3	1
4	2
5	3

\rightarrow ~~the~~ $f^{-1}(x) \rightarrow$

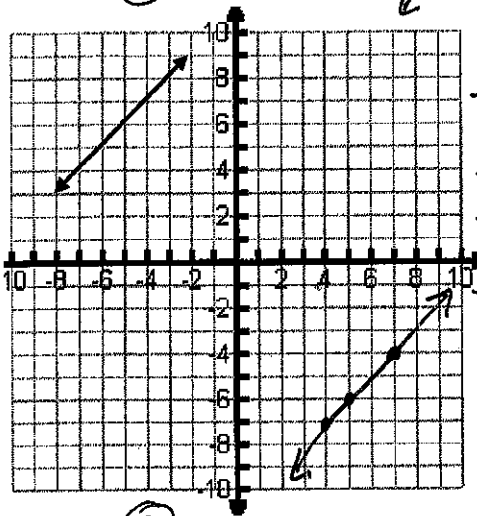
x	y
1	3
2	4
3	5

Sketch the graph of the inverse. CIRCLE THE NUMBERS WHOSE INVERSES ARE FUNCTIONS.

$$f(x) \begin{array}{c|c} x & y \\ \hline -4 & 4 \\ 0 & 1 \\ 2 & 2 \end{array}$$

$$f^{-1}(x) \begin{array}{c|c} x & y \\ \hline 4 & -4 \\ 1 & 0 \\ 2 & -2 \end{array}$$

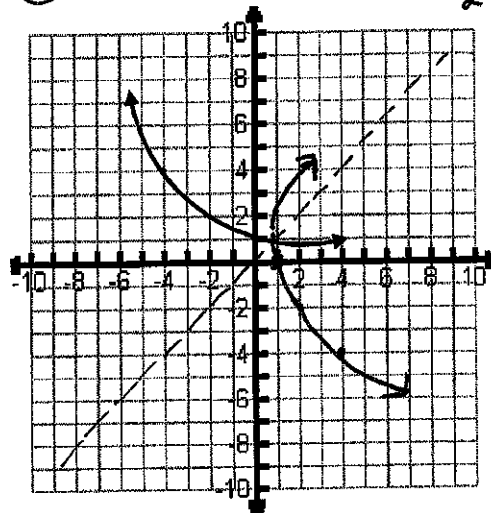
4.



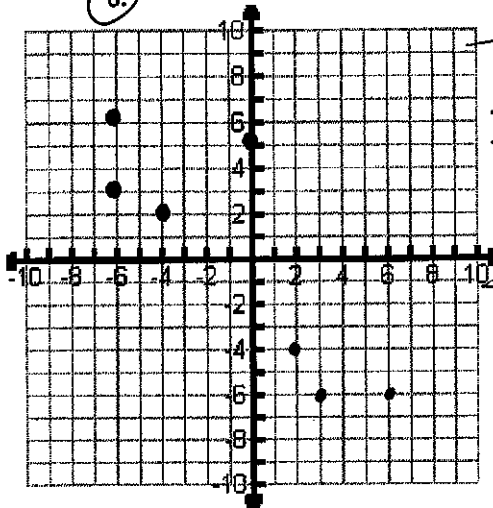
$$f(x) \begin{array}{c|c} x & y \\ \hline -4 & 7 \\ -6 & 5 \\ -7 & 4 \end{array}$$

$$f^{-1}(x) \begin{array}{c|c} x & y \\ \hline 7 & -4 \\ 5 & -6 \\ 4 & -7 \end{array}$$

5.



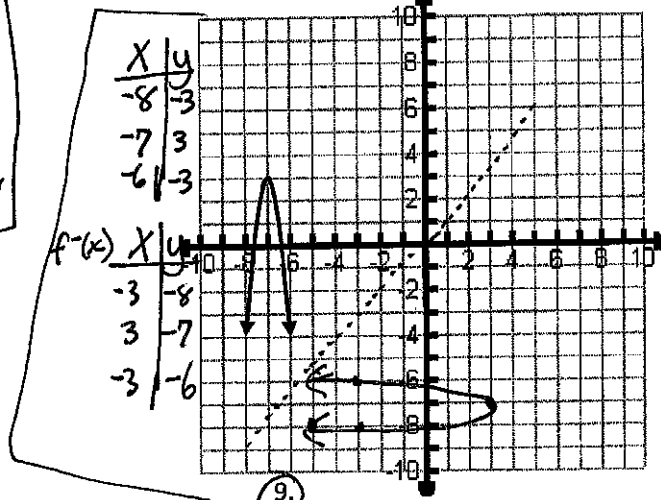
6.



$$\begin{array}{c|c} x & y \\ \hline -6 & 6 \\ -6 & 3 \\ -4 & 2 \end{array}$$

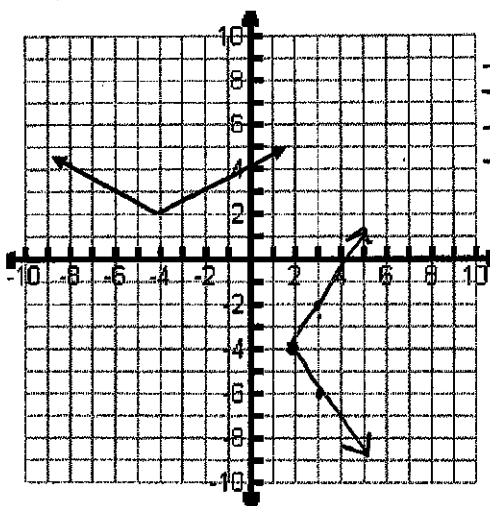
$$f^{-1}(x) \begin{array}{c|c} x & y \\ \hline 6 & -6 \\ 3 & -6 \\ 2 & -4 \end{array}$$

7.



$$f^{-1}(x) \begin{array}{c|c} x & y \\ \hline -8 & -3 \\ -7 & 3 \\ -6 & -3 \end{array}$$

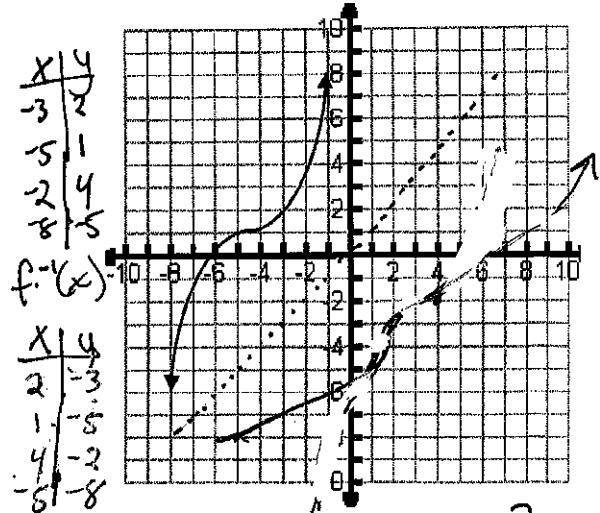
8.



$$\begin{array}{c|c} x & y \\ \hline -4 & 2 \\ -6 & 3 \\ -2 & 3 \end{array}$$

$$f^{-1}(x) \begin{array}{c|c} x & y \\ \hline 2 & -4 \\ 3 & -6 \\ 3 & -2 \end{array}$$

9.



$$\begin{array}{c|c} x & y \\ \hline -3 & 2 \\ -5 & 1 \\ -2 & 4 \\ 8 & 5 \end{array}$$

$$f^{-1}(x) \begin{array}{c|c} x & y \\ \hline 2 & -3 \\ 3 & -5 \\ 4 & -2 \\ 5 & -8 \end{array}$$