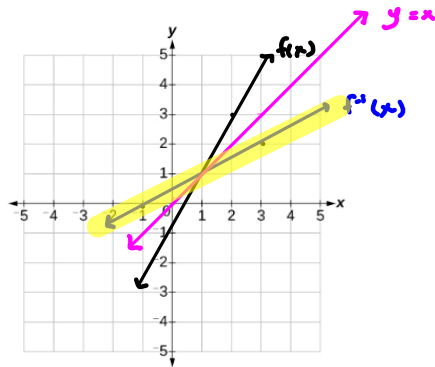


**Formative Assessment #11** – Equations and Graphs of Inverses

**RF3.6:** I can determine the equation and sketch the graph of the inverse of a relation given the equation of a linear function.

1. Sketch and highlight the graph of the inverse of the function  $f(x) = 2x - 1$ . As part of your solution, include a table of values containing at least three points on the graph of the inverse. Also, graph and label the line of reflection.



$x$	$y$
0	-1
1	1
2	3

Image Points

$x$	$y$
-1	0
1	1
3	2

Code(s)	Learning Categories						Assessed by:
	EH	EL	AH	AL	NH	NL	
RF3.6							
Notes							

$f(x)$  D:  $x \leq -3$       inverse D:  $x \geq -7$   
 R:  $y \geq -7$                       R:  $y \leq -3$

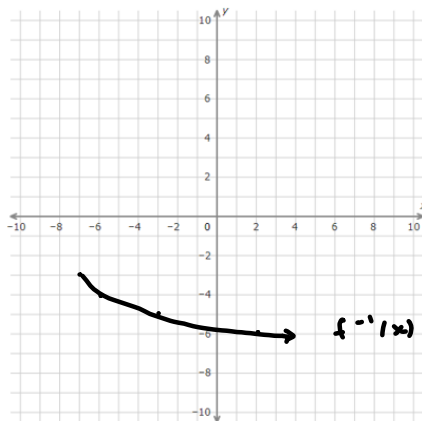
**RF3.6:** I can determine the equation and sketch the graph of the inverse of a relation given the equation of a quadratic function.

2. Given:  $f(x) = (x + 3)^2 - 7, x \leq -3$  Choose the negative root.

- a) Determine the equation of the inverse of  $f(x)$  and express it using appropriate notation.

$y = (x + 3)^2 - 7$   
 $x = (y + 3)^2 - 7$   
 $x + 7 = (y + 3)^2$   
 $\pm \sqrt{x + 7} = y + 3$   
 $\pm \sqrt{x + 7} - 3 = y$   
 $f^{-1}(x) = -\sqrt{x + 7} - 3$

- b) Draw the graph of the inverse of  $f(x)$  on the set of axes below.



$x$	$y$
-7	-3
-6	-4
-3	-5
2	-6

Code(s)	Learning Categories						Assessed by:
	a)	EH	EL	AH	AL	NH	
RF3.6	b)	EH	EL	AH	AL	NH	NL
Notes							