

10-3

I can graph the inverse functions of

$f(x) = x^2$  and  $f(x) = x^3$

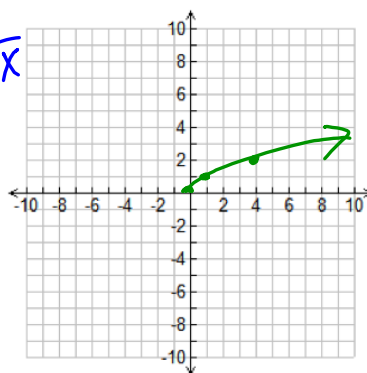
$y = x^2$   
 $\sqrt{x} = \sqrt{y^2}$   
 $\sqrt{x} = y$   
 $f^{-1}(x) = \sqrt{x}$

$y = x^3$   
 $\sqrt[3]{x} = \sqrt[3]{y^3}$   
 $\sqrt[3]{x} = y$   
 $f^{-1}(x) = \sqrt[3]{x}$

Find the inverse algebraically then graph it.

$f(x) = x^2$   $f(x) = \sqrt{x}$

x	f(x)	f(x)	x
-2	4	4	-2
-1	1	1	-1
0	0	0	0
1	1	1	1
2	4	4	2



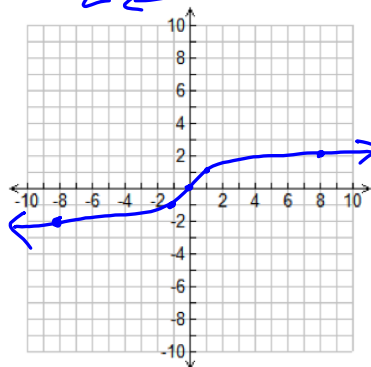
Domain: (x's)  $[0, \infty)$   
 Range: (y's)  $[0, \infty)$

Solve for the inverse algebraically then graph it.

$$f(x) = x^3$$

$\sqrt{-8}$   
 $-2 \sqrt{2 \cdot 2 \cdot 2}$

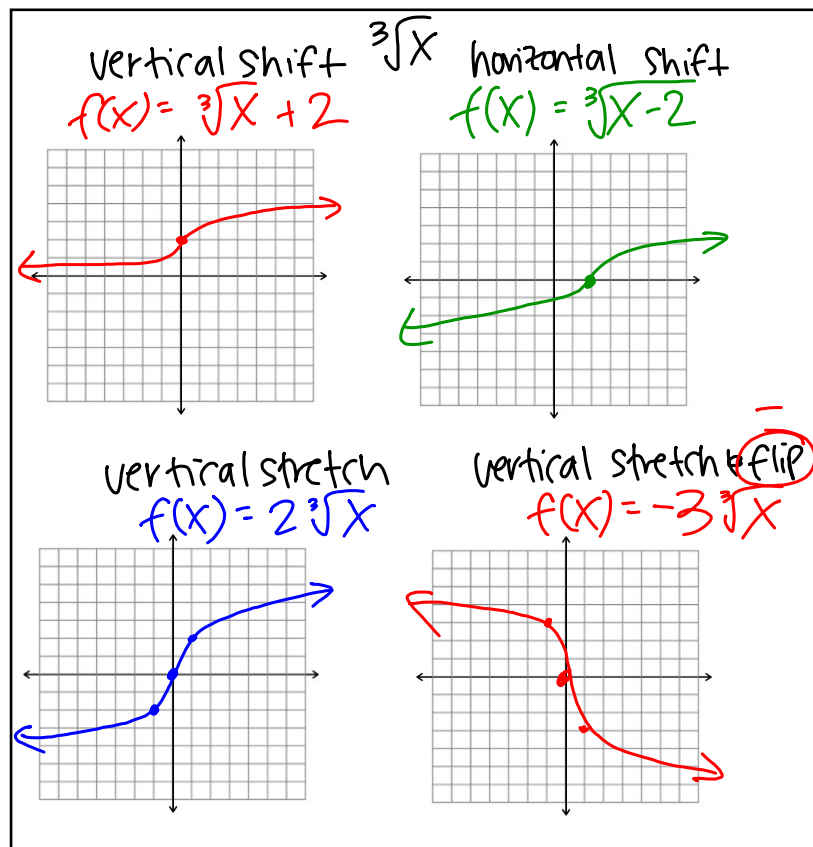
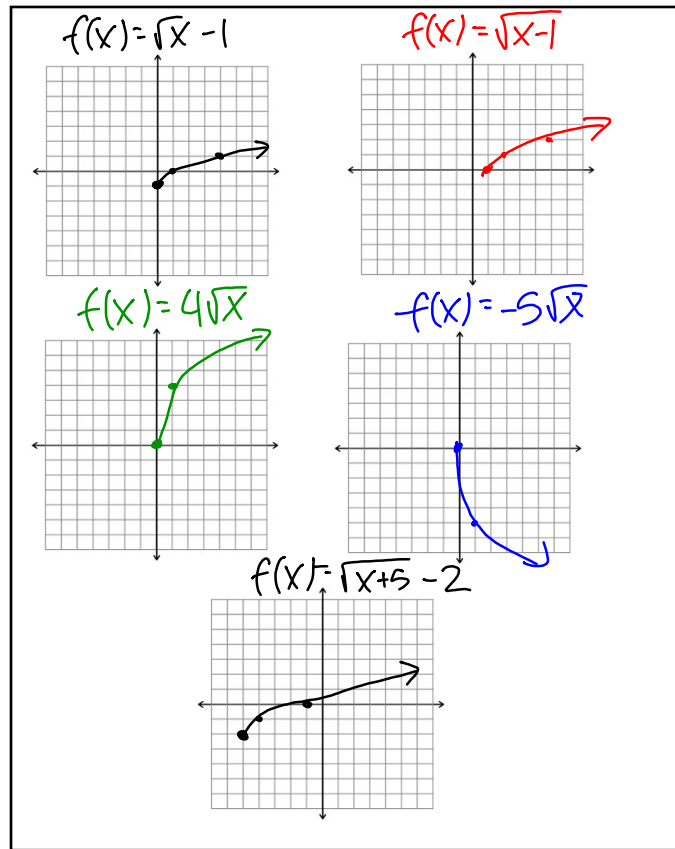
x	f(x)	f(x)	x
-2	-8	-8	-2
-1	-1	-1	-1
0	0	0	0
1	1	1	1
2	8	8	2
3	27	27	3



x Domain:  $(-\infty, \infty)$   
 y Range:  $(-\infty, \infty)$

$$f(x) = a(x-h)^2 + k$$

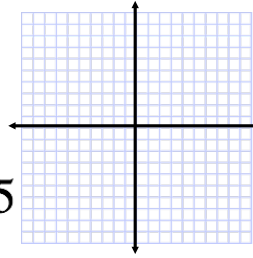
Flipped ←  
 Stretch ←  
 For L  
 X's lie  
 U or D



Check for understanding

#1 Graph the function

$$f(x) = 2\sqrt[3]{x-2} + 5$$



#2 Write an equation for the graph

