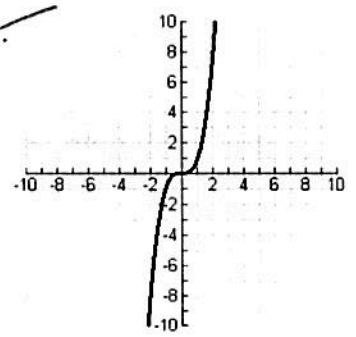
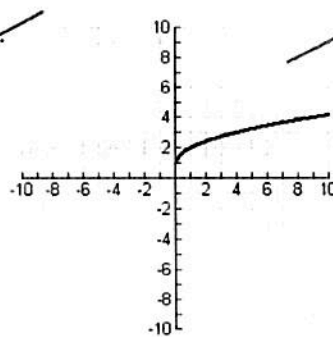
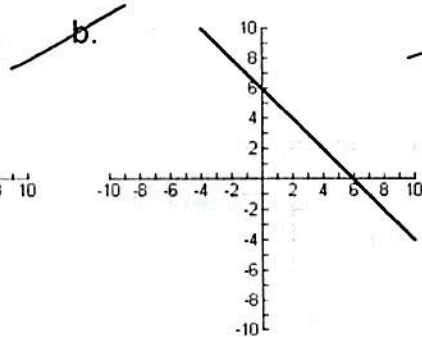
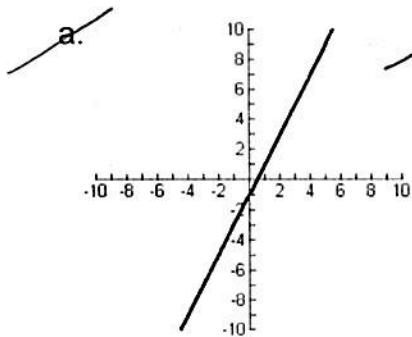
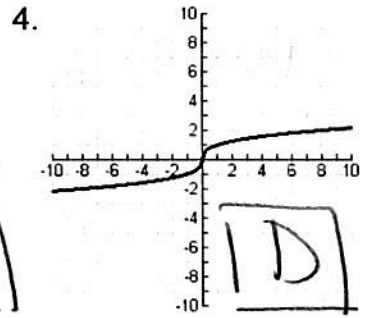
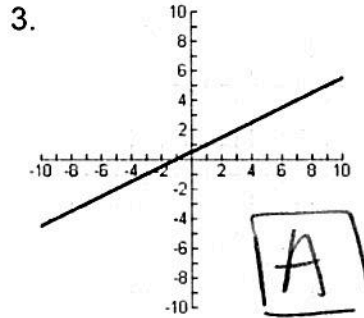
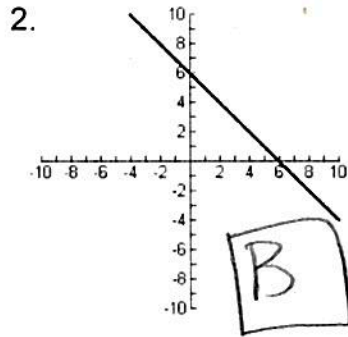
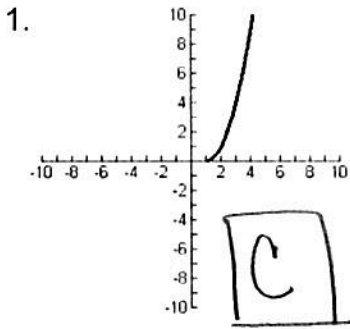


Match the graph of the function with the graph of its inverse function. {The graphs of the inverse functions are labeled (a), (b), (c), and (d)}



5. Find the inverse algebraically.

$$f(x) = 2x + 5$$

$$\begin{array}{r} X = 2y + 5 \\ -5 \quad | \quad -5 \\ \hline X - 5 = 2y \\ \hline \frac{X - 5}{2} \end{array}$$

$$f^{-1}(x) = \frac{x-5}{2} \text{ or } \frac{1}{2}x - \frac{5}{2}$$

6.

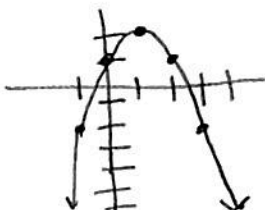
x	-1	0	1	2	3	4
f(x)	-2	1	2	1	-2	-6

Is the inverse of  $f(x)$  a function?

NO, the x-value of (-2) will repeat on the inverse.

Is  $f(x)$  an even function? Explain your reasoning.

No, not symmetric about y axis.

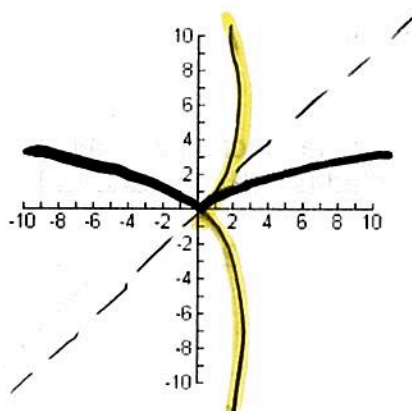


7. Does the function have an inverse function?

NO, the inverse is NOT  
a function

Is the function even, odd, or neither?

Even - symmetric  
about y axis



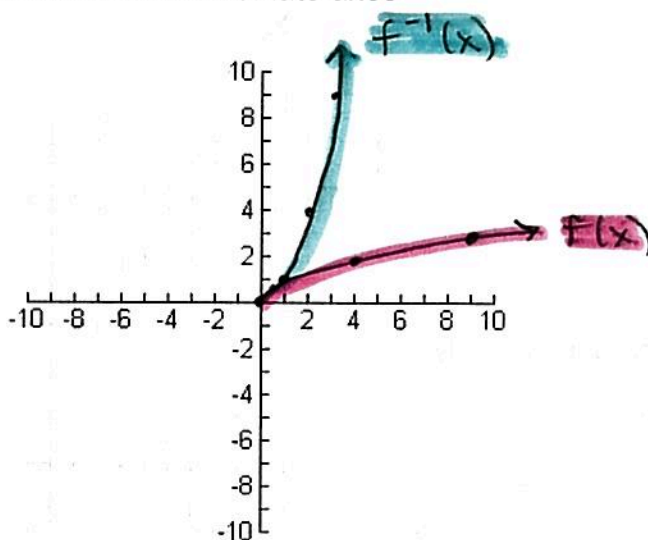
8. (a) Find the inverse function of  $f(x) = \sqrt{x}$ .

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

$$f^{-1}(x) = x^2, x \geq 0$$

restrict domain!

(b) Graph both  $f$  and  $f^{-1}$  on the same set of coordinate axes



Determine whether the function has an inverse function. If it does, find the inverse function.

9.  $f(x) = x^4$

$$4\sqrt{x} = 4\sqrt[4]{y}$$

$$f^{-1}(x) = \sqrt[4]{x}$$

10.  $f(x) = (x+3)^2, x \geq 3$

$$\sqrt{x} = \sqrt{(y+3)^2}$$

$$\sqrt{x} = y + 3$$

$$\begin{array}{r} -3 \\ \hline \end{array}$$

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