Homework: Inverse Functions

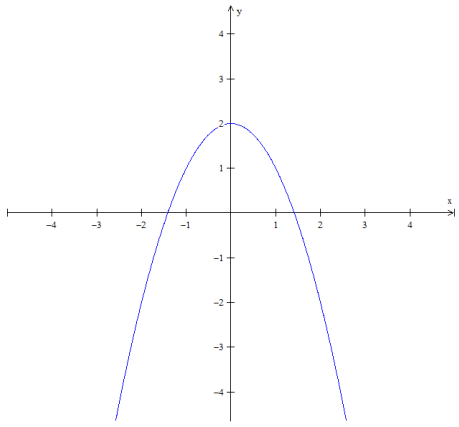
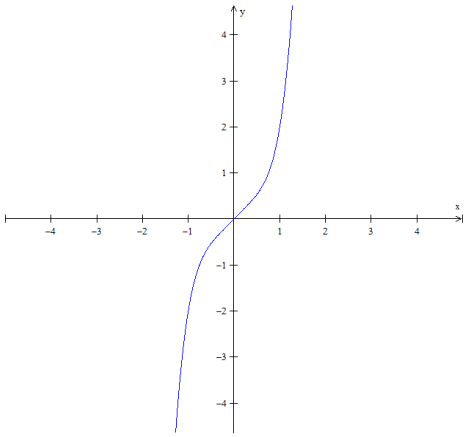
In Problems 1-5, determine whether f and g are inverses of each other

1. $f(x)=7x-1 \quad and \quad g(x)=\frac{1}{7}x+\frac{1}{7}$	2. $f(x)=4x+3 \quad and \quad g(x)=\frac{x-3}{4}$
3. $f(x)=9x-2 \quad and \quad g(x)=\frac{x+4}{9}$	4. $f(x)=\frac{5}{x-1} \quad and \quad g(x)=\frac{x+5}{x}$
5. $f(x)=-5x \quad and \quad g(x)=-6x$	

In Problems 6-14, find the inverse of the function

6. $f(x)=7x-1$	7. $f(x)=8x+2$
8. $f(x)=5x-1$	9. $f(x)=x^3-5$
10. $f(x)=(x+1)^3$	11. $f(x)=\frac{5}{x}$
12. $f(x)=\sqrt{x-1}$	13. $f(x)=\frac{8}{x}-2$
14. $f(x)=\frac{9x+1}{x-4}$	

In Problems 15-17, determine which graphs represent functions that have inverse functions

15. 	16. 

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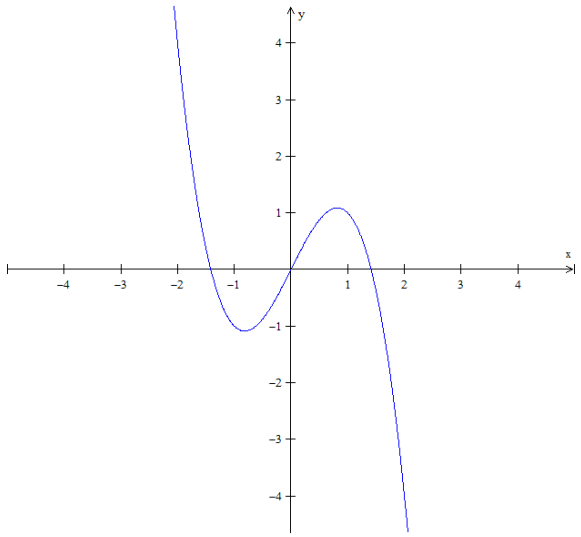
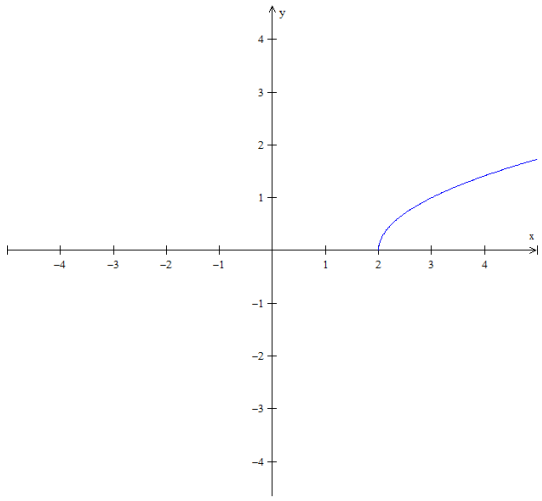
17.

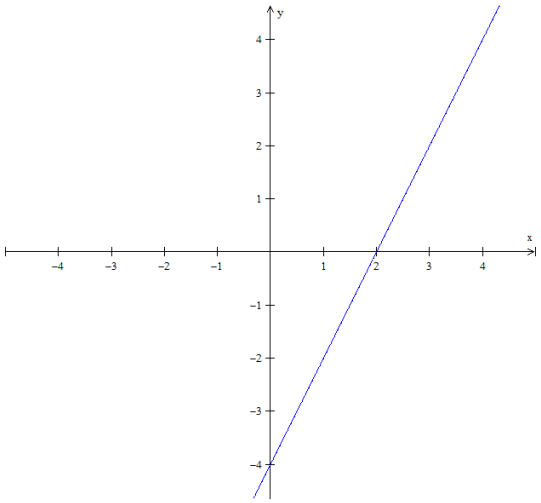


In Problems 18-19, use the graph of f to draw the graph of its inverse function

18.



19.



In Problems 20-26, find the inverse of the function

20. $f(x) = 10x + 1$	21. $f(x) = x^2 - 2, x \geq 0$
22. $f(x) = (x+3)^2, x \leq -3$	23. $f(x) = x^3 + 4$

24. $f(x) = (x-2)^5$	25. $f(x) = \sqrt{x+3}$
26. $f(x) = \sqrt[3]{x} + 4$	