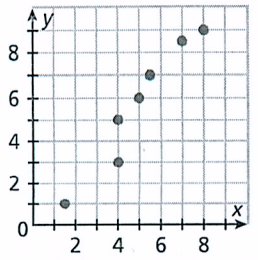
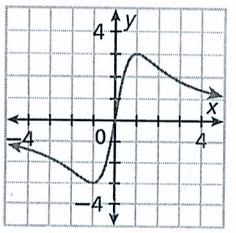
Algebra II Class Work #3 Inverse Functions Name_____

Use the horizontal line test to determine whether the inverse of each relation is a function.

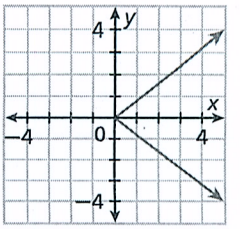
1.



2.



3.



Find the inverse of each function. Determine whether the inverse (one-to-one) is a function and state its domain and range.

4. $f(x) = -3x + 21$

$f^{-1}(x) =$ _____

$D:$ _____ $R:$ _____

5. $g(x) = x^2 - 9$

$f^{-1}(x) =$ _____

$D:$ _____ $R:$ _____

6. $f(x) = -3x + 21$

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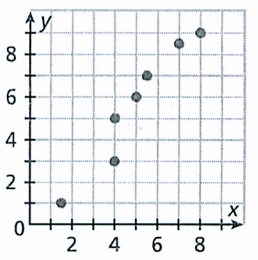
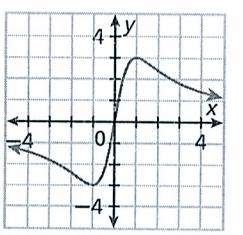
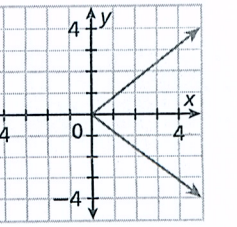


2.



3.



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Determine by COMPOSITION whether each pair of functions are inverses.

7. $f(x)=4x-12$ and $g(x)=-4x+8$

8. $f(x)=\sqrt{3x}$ and $g(x)=\frac{x^2}{3}$ for $x\geq 0$

Find the inverse of each function. Determine whether the inverse (one-to-one) is a function and state its domain and range.

12. $f(x)=\frac{3}{5}x$

$f^{-1}(x)=$ _____

$D:$ _____ $R:$ _____

13. $f(x)=8x^3$

$f^{-1}(x)=$ _____

$D:$ _____ $R:$ _____

14. $f(x)=\frac{x}{x+1}$

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