Name: Date: Period:

Lesson 5.1.2 Assignment

5-26. Write the equation of the inverse for each of the following functions. Homework Help ✎

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a. $f(x) = 3x - 8$ b. $f(x) = \frac{1}{2}x + 6$ c. $f(x) = \frac{x+6}{2}$

Please show your work to get full credits.

a.
b.
c.

5-28.

Solve the following systems of equations. In other words, find values of a and b that make each system true. Be sure to show your work or explain your thinking clearly. Homework Help ✎

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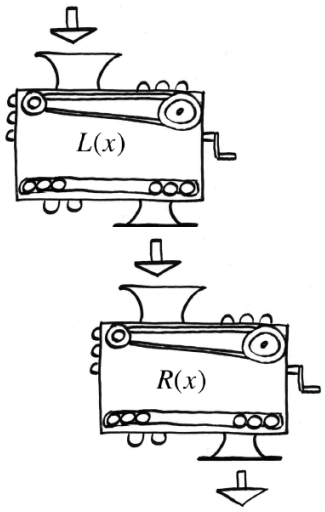
a. $3 = a \cdot b^0$
$75 = a \cdot b^2$

b. $18 = a \cdot b^2$
$54 = a \cdot b^3$

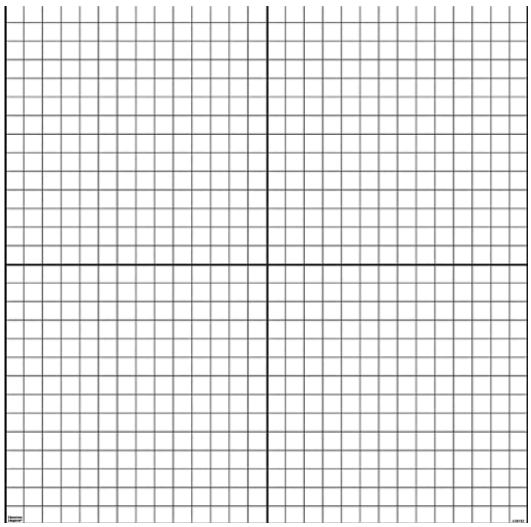
a.	b.

5-29. Lacey and Richens each have a personal function machine. Lacey's machine, L(x) , squares the input and then subtracts 1. Richens' function machine, R(x), adds 2 to the input and then multiplies the result by 3. Homework Help ✎

a. Write equations that represent L(x) and R(x).
b. Lacey and Richens decide to connect their two machines so that Lacey's output becomes Richens' input. If 3 is the initial input, what is the final output?
c. What if the order of the machines is changed? Would it change the output? Justify your answer.

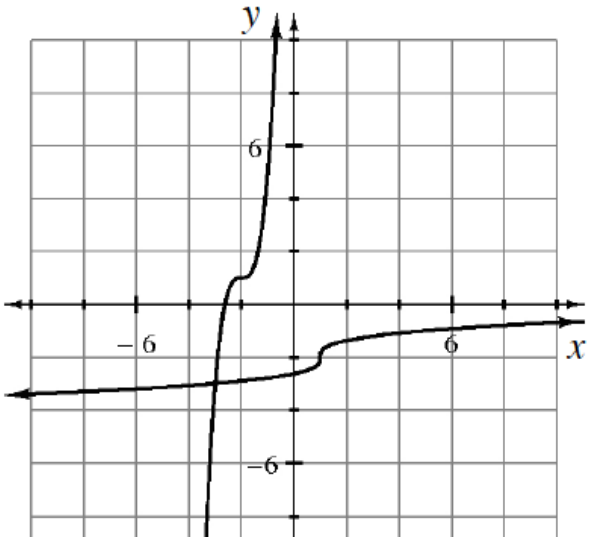


5-32. Graph $y = 5(x-2)$ and its inverse on the same set of axes. Label the graph and the inverse function with their equations. Homework Help ✎



5-33. Look at the graph of a function and its inverse, shown at right. If $h(x)$ is a function and $h^{-1}(x)$ is its inverse, can you tell which is which? Why or why not? Homework Help ✎

Homework Help ✎



5-34. The function f(x) is represented in the graph at right. Draw a graph of its inverse function. Be sure to state the domain and range for both f(x) and $f^{-1}(x)$. What is the relationship between the domain and range of the original function and the domain and range of the inverse? *5-34 HW eTool* (Desmos) Homework Help ✎