AGS 3: Unit 1 Review

Name: _____

Date: _____ Per: _____

For each given table, give the table for its inverse and determine if the inverse is a function.

1.

x	$f(x)$
2	5
3	3
4	1
5	−1
6	−3
7	−5

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

Is $f^{-1}(x)$ a function? If not, tell why not.

2.

x	$g(x)$
−2	−3
−1	−2
0	−1
1	−2
2	−3
4	−5

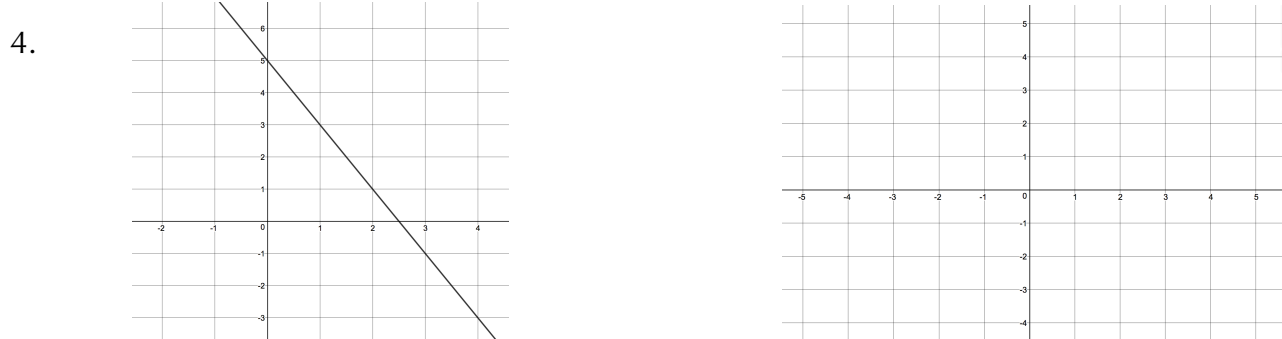| x	$g^{-1}(x)$

Is $g^{-1}(x)$ a function? If not, tell why not.

For each given graph, give the graph for its inverse and determine if the inverse is a function.
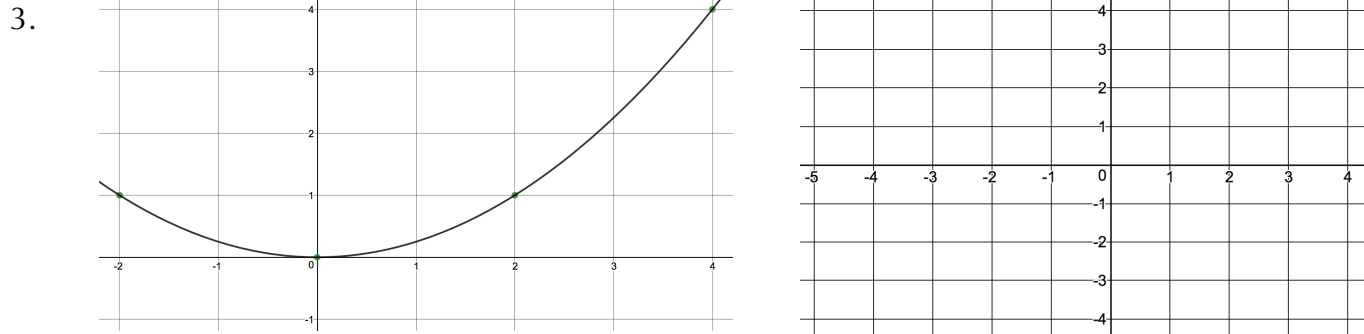
3.

Is the inverse a function? If not, tell why not.

4.

Is the inverse a function? If not, tell why not.

For each given equation, find the inverse equation and write it in inverse function notation.

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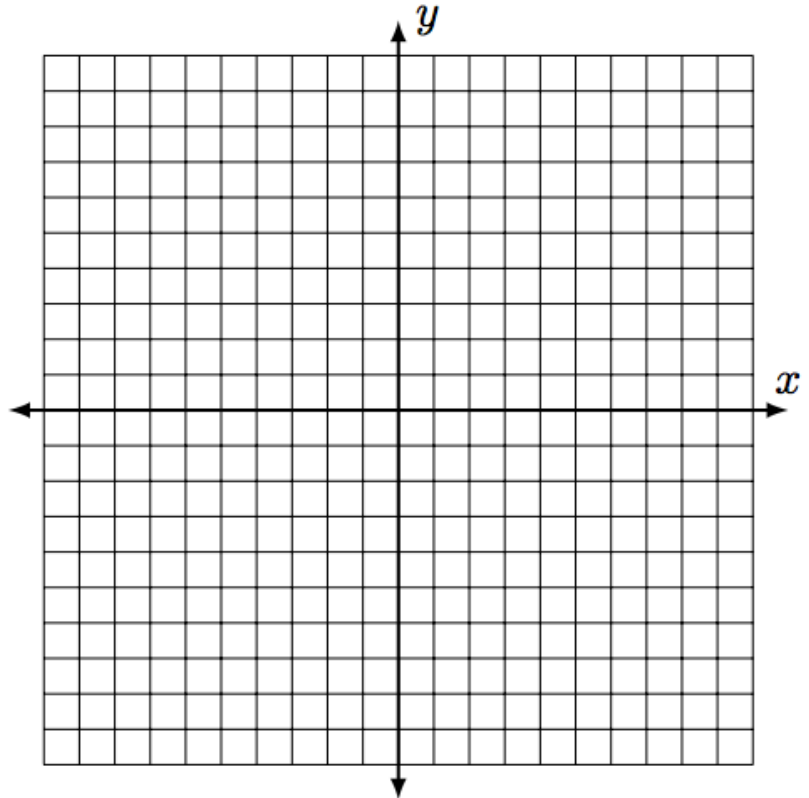
6. $g(x) = \frac{x-4}{3}$

For each given equation, find the inverse equation and write it in inverse function notation.

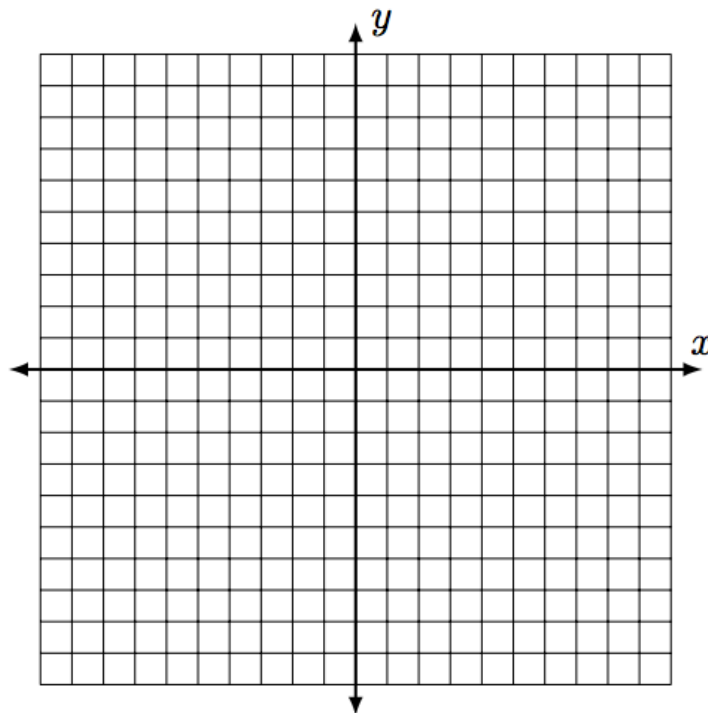7. $h(x) = 2x^2 + 6$ 8. $k(x) = \sqrt{x} + 3$

9.   Given the function $f(x) = x^2 - 2$. Model the function below.

Give the features of the function.

10.   Give the inverse of the function in #9.

       Is the inverse a function? Explain.

11.   Is an inverse always a function? What can you change so an inverse that is not a function can be a function?

12.   Use composition of functions to determine if the given functions are inverses of each other.

       $f(x) = \sqrt{2x + 6}$ and $g(x) = \frac{1}{2}x^2 - 3$

13.   What are the ways you can show that two functions are inverses of each other?