AA3: Inverses Notes

I can find the INVERSE of a function algebraically.

The first step to finding the inverse of

$h(x) = \sqrt{2x+1} + 5$ is to switch the _____

and the ______ to form the equation

____

Then solve this equation for _______ by

Reversing Operations.

I can find the INVERSE from a given table.

The table representing the inverse $f^{-1}(x)$ can be

created by ___________________________________

____.

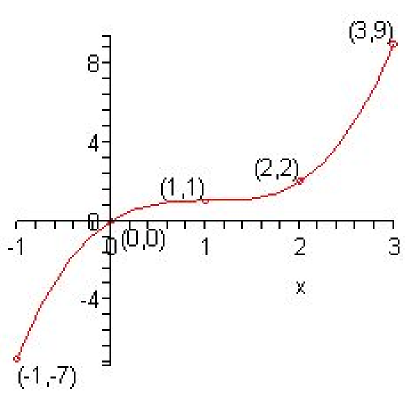
x	*f*(*x*)
-8	-2
-1	-1
0	0
1	1
8	2

I can graph the INVERSE from a given graph.

To draw the INVERSE, I locate _____________ on the

original graph and switch the _____ and the ______ and

graph these new points.

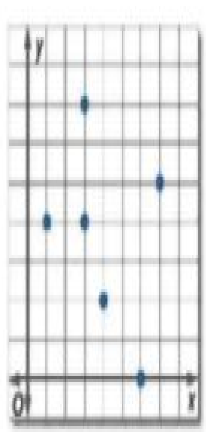
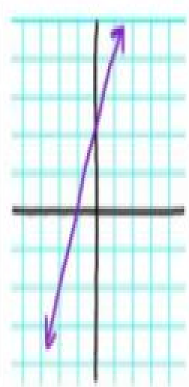
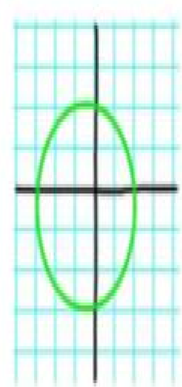
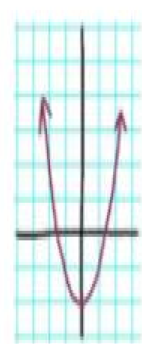


I can use a graph to determine whether or not a RELATION is a FUNCTION.

The ________________ Line Test shows that a

RELATION is a function if any ______________ line

hits the graph in AT MOST _________ point.

I can use a table to determine whether or not a RELATION is a FUNCTION.

If a table has repeated ____ values that have different ____ values then the table ____________________

If each _____ value in a table has only one ______

value then the table _________________________

____

x	y
3	3
4	5
5	7
5	9
6	11

x	y
5	31
6	28
7	25
8	22
9	19

x	y
2	3
3	3
4	3
5	3
6	3

x	y
7	10
8	20
9	30
9	40
10	50

I can use COMPOSITE FUNCTIONS to determine whether on not two functions are INVERSES.

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

The COMPOSITE FUNCTION $f(g(x))$ means you

replace the x in _________ with ______________

If two functions are INVERSES then $f(g(x))$

simplifies to ________. This makes sense because

if two functions are INVERSES, combining the two

functions should ___________________________

____.

Function Practice: Let $f(x) = (x-3)^3 + 5$ **and** $g(x) = \sqrt[3]{x-5} + 3$

Find the following:

1. $f(3)$ **2.** $g(5)$ **3.** $g(f(0))$ **4.** $f(g(4))$

Solve the following:

5. $f(x) = 5$ **6.** $g(x) = 3$ **7.** $f(x) = 4$ **8.** $g(x) = 0$

Simplify the following:

9. $f(g(x))$ **10.** $g(f(x))$