# Cornell Notes

| Name | Rachel Manton | Date | 9-28-2011 |
|---|---|---|---|
| Topic | Alg II — Inverse Functions | Class/ Subject | Asbery Per 3 |

10:10 **Do Now**

Which is correct

Format 6-3

$x^3x^{-7} = \frac{x^3}{x^{-7}} = x^{10}; x \neq 0$

$x^3x^{-7} = \frac{x^3}{x^{-7}} = x^4; x \neq 0$

$x^3x^{-7} = \frac{x^3}{x^7} = \frac{1}{x^4}; x \neq 0$

10:20 **Correct HW**

i) $(f \circ g)(x) = f(g(x)) = f\left(\frac{-x}{1-2x}\right)$

$= 7 - 3\left(\frac{-x}{1-2x}\right) = 7 + \frac{3x}{1-2x}$

4) $(j \circ g)(x) = j\left(\frac{-x}{1-2x}\right) = 2 - 3\left(\frac{-x}{1-2x}\right) - \left(\frac{-x}{1-2x}\right)^2$

10:35 **Exploring Inverse Functions**

Follow the steps to find the inverse of

$f(x) = \frac{x-3}{2}$

1) Find the y values for at least 5 values of x. Make a table. Use -3, -1, 1, 3, 5
2) Plot the points and draw your line
3) Switch the x & y values from step 1. Make a new table $x \Rightarrow y$, $y \Rightarrow x$
4) Plot the new points on the same graph & draw your line.
5) Write an equation for the new line. Call this function $g(x)$
6) Fold your paper so the two lines lie directly on top of one another

HW: ~~Assignment #22~~:
Exploring Inverse Functions Handout

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cont...

10:57

7) How are the 2 lines geometrically related?

8) In words, f is the function that subtracts 3 from x and then divids by 2. Describe the function g in words.

AW handout

start on m class

# Exploring Inverse Functions

**Homework:**

**You are to do the following three functions (located on page 421 in your text book) using the same steps we used in class.**

$f(x) = 2x + 5$ $\qquad$ $f(x) = \dfrac{x-2}{4}$

$f(x) = 5 - \dfrac{5}{2}x$

1. Complete **Steps 1-5** from above to find the inverse of your function.
2. Complete **Steps 6 and 8.**
3. How can you graph the inverse of a function without finding the order pairs first?
4. How can you test to see if one function is the inverse of another?

# Exploring Inverse Functions

**Follow the steps to find the inverse of** $f(x)=\frac{x-3}{2}$

1. **Find the y values for at least 5 values of x. (Hint: Make a table and use -3, -1, 1, 3 and 5)**
2. **Plot the points on your graph paper and draw a line through them.**
3. **Switch the x and y values you found in step 1. Make a new table of these values.(This means "x" becomes "y" and "y" becomes "x".)**
4. **Plot these new points on the same axis used in step 2 and draw a line through the points.**
5. **Write an equation for the new line. Call this function** $g(x)$**.**
6. **Fold your paper so that the two lines lie directly on top off one another.**
7. **How the two lines are geometrically related?**
8. **In words, f is the function that subtracts 3 from x and then divides by** 2. **Describe the function g in words.**