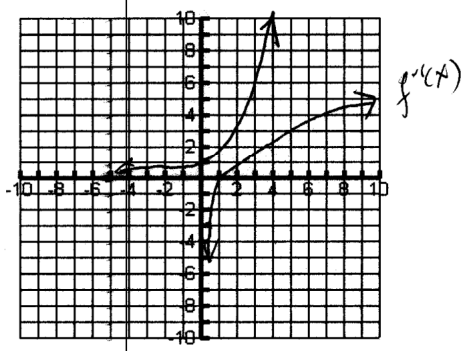
III Key

Extra Review Problems Semester 2:

1. Write the logarithm below in exponential form and then graph.

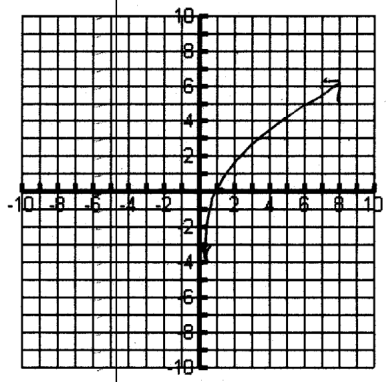
$\log_2 y = x$

Exponential equation $2^x = y$



2. Graph the inverse function

$y = \log_2 x$



3. Graph the relation given by the points in the table below and connect the points. Then graph the inverse.

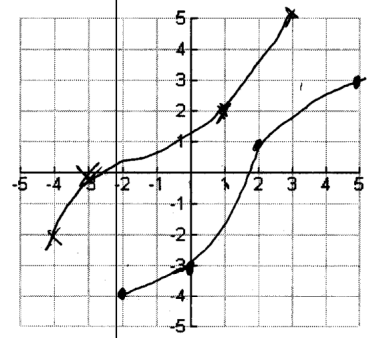
X	-2	0	2	5
Y	-4	-3	1	3

A) Domain of the given function: $\{-2, 0, 2, 5\}$

B) Range of the given function: $\{-4, -3, 1, 3\}$

C) Domain of the inverse: $\{-4, -3, 1, 3\}$

D) Range of the inverse: $\{-2, 0, 2, 5\}$



KEY - III

4. Write in the order from least to greatest: $\log 1000$, $\ln e$, $\frac{1}{2}\ln e^4$, $\ln 1$

$\ln(1)$, $\ln(e)$, $\frac{1}{2}\ln(e^4)$, $\log_{10}(1000)$

5. Complete the following (without a calculator):

$\log_7 7^x =$ X $\quad \log_5 5^3 =$ 3 $\quad 5^{\log_5 6} =$ 6 $\quad 7^{\log_7(3x-2)} =$ 3x-2

6. Solve: $\log_2 32^6 =$ 30

Simplify. Assume that all expressions are defined.

7. $\dfrac{\dfrac{2x+5}{x^2-4}}{\dfrac{7}{x+2}}$ $\quad \dfrac{2x+5}{7(x-2)}$

8. $\dfrac{\dfrac{x}{x+3}}{x+\dfrac{x}{5}}$ $\quad \dfrac{5}{6(x+3)}$