

5.3
25

$$f(x) = \frac{x^4}{4} - 2x^2$$

$$f'(x) = \frac{4x^3}{4} - 4x$$

$$= x^3 - 4x$$

$$= x(x^2 - 4)$$

$x = 0, -2, 2$

$f(a) = f(b)$
 \therefore the inverse
 Does not exist
 b/c it is not
 monoton.c

Always Inc/Dec
 Yes monu.
 \therefore has inverse

No monoton.c

Mar 10-9:47 AM

Horizontal Line Test

$f(a) = f(a)$
 Passes HLT
 \therefore it is monotonic
 \therefore It has an Inverse

$f(a) = f(b) = f(c)$
 Does not Pass HLT
 \therefore Not Monoton.c
 \therefore NO Inverse

Mar 10-9:56 AM

1-8

a) $f(g(x)) = x = g(f(x))$

b)

9-12

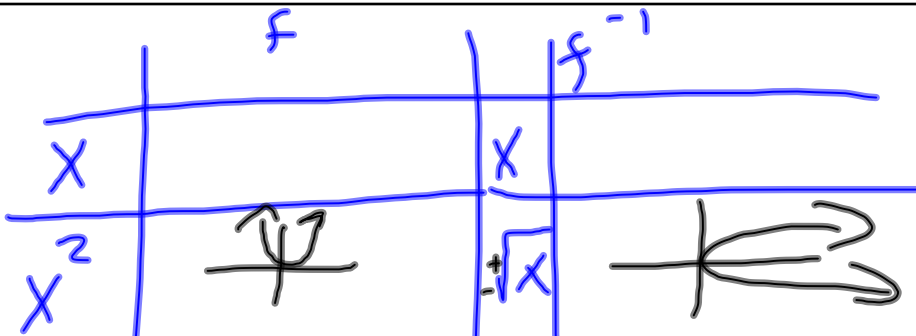
Across $y = x$

① $y = 2x$
 $x = 2y$

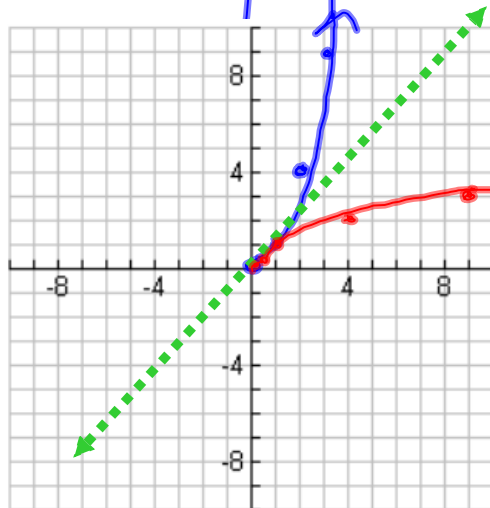
$y = \frac{1}{2}x$

$\sqrt[3]{x} \Rightarrow x^3$
 $\sqrt{x} \Rightarrow x^2$

Mar 10-10:00 AM



$y = x$
 $x = y$



x	y
0	0
2	4
3	9

x	y
0	0
4	2
9	3

Mar 10-10:02 AM

$(a) \begin{matrix} \cancel{f} \\ x: (2, 0) \\ y: (0, -2) \end{matrix}$

$\begin{matrix} \cancel{f^{-1}} \\ y: (0, 2) \\ x: (-2, 0) \end{matrix}$

Mar 10-10:06 AM

5.4
 Pg 356
 1-11000
 35-55000
 Friday

e^u
 u^e

Mar 10-10:19 AM