1. What is a Vertical Line test used for?

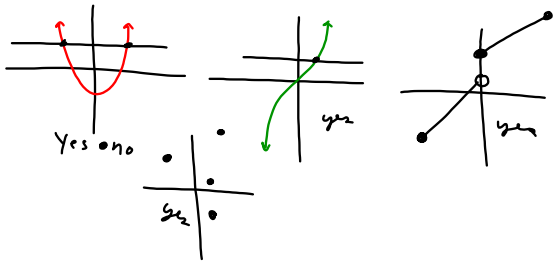
2. What is a Horizontal Line test used for?

Oct 8-10:05 AM

4.1 Horizontal Lines & Inverses

Vertical - Function or Not a Function

Horizontal - one to one



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Inverses

$g(x) = \frac{-5x+6}{8+9x}$

① $y = \frac{-5x+6}{8+9x}$

② $(8+9y)x = \frac{-5y+6}{8+9y}(8+9y)$

③ $x(8+9y) = -5y+6$

$8x+9xy = -5y+6$

$8x+9xy+5y = 6$

$9xy+5y = -8x+6$

$\frac{y(9x+5)}{9x+5} = \frac{-8x+6}{9x+5}$

$y = \frac{-8x+6}{9x+5}$

④ $g^{-1}(x) = \frac{-8x+6}{9x+5}$

$g^{-1}(x) = \frac{6-8x}{9x+5}$

Domain $(-\infty, -\frac{5}{9}) \cup (-\frac{5}{9}, \infty)$

$9x+5=0$, $-5\ -5$, $9x=-5$, $x=-\frac{5}{9}$

Range $(-\infty, \frac{8}{9}) \cup (\frac{8}{9}, \infty)$

$8+9x=0$, $9x=-8$, $x=-\frac{8}{9}$

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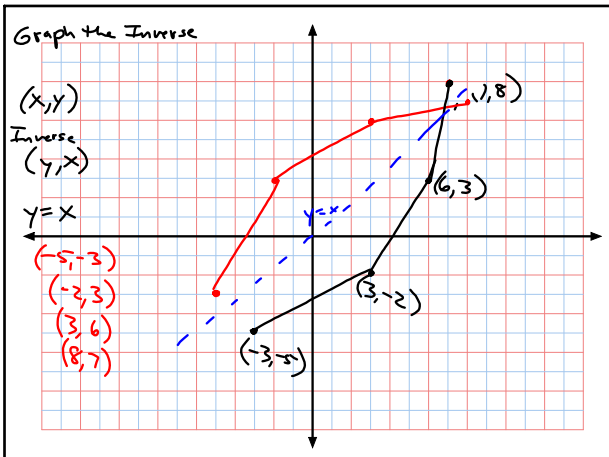
Graph the Inverse

(x,y)

Inverse (y,x)

y=x

(1,8) (6,3) (3,-2) (-3,-5) (-5,-3) (-2,3) (3,6) (8,7)



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Scientists - temp & height

$T(h) = 41-1.25h$

height → Temp

T^{-1} temp → height

(A) The height above the surface when Temp is x degrees

(B) $T(h) = 41-1.25h$

$x = 41-1.25h$

$h = 41-1.25x$

$\frac{1.25x}{1.25} = \frac{41-h}{1.25}$

$x = \frac{41-h}{1.25}$

(C) $T^{-1}(30)$:

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calc

$e^{.4} =$

$325e^{-.95} =$

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