FUNCTION

FOR EVERY X THERE IS ONLY ONE Y

EASIER DEF: FUNCTION

IF YOU HAVE ONE OF THE FOLLOWING IT IS NOT A FUNCTION:

y^2, y^4, y EVEN POWER

$|y|, \pm\sqrt{x}, \pm x$

X = NUMBER ($X=3$)

1:1 FUNCTION

FOR EVERY X THERE IS ONLY ONE Y AND FOR EVERY Y THERE IS ONLY ONE X

EASIER DEF: 1:1 FUNCTION

IF YOU HAVE ONE OF THE FOLLOWING IT IS NOT A 1:1 FUNCTION:

x^2, x^4, x EVEN POWER

y^2, y^4, y EVEN POWER

$|x|, |y|, \pm\sqrt{x}, \pm x,$

$\pm y, \pm\sqrt{y},$

X = NUMBER

y = NUMBER

→ UNLESS THERE IS A CONDITION PUT ON X:

ex: $y = x^2, x \geq 0$

HORIZONTAL LINE TEST (1:1)

IF YOU ANY HORIZ. LINE INTERSECTS THE GRAPH AT 2 OR MORE PLACES IT IS NOT 1:1

NOTE: IF A FUNCTION IS 1:1, IT HAS AN INVERSE, IF IT IS NOT 1:1 THEN NO INVERSE

INVERSE FUNCTIONS

f AND g ARE INVERSES IF

$f \circ g = X$

AND

$g \circ f = X$