BOARD NOTES

7 OCTOBER 2019

2A.2 (B) graph and write the inverse of a function using notation such as $f^{-1}(x)$;
2A.2 (C) describe and analyze the relationship between a function and its inverse (quadratic and square root, logarithmic and exponential), including the restriction(s) on domain, which will restrict its range;

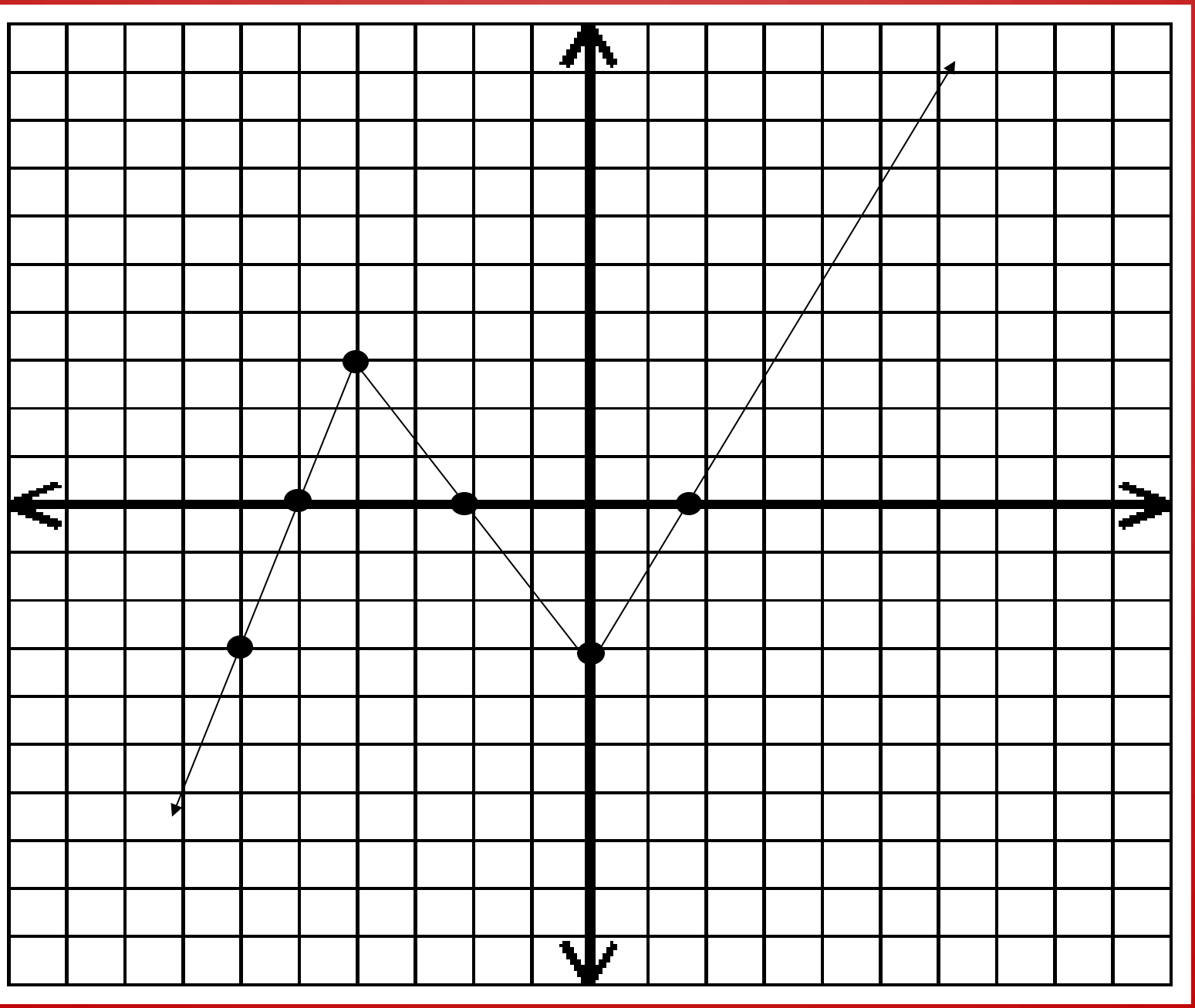
We will be able to determine the inverse of an equation.

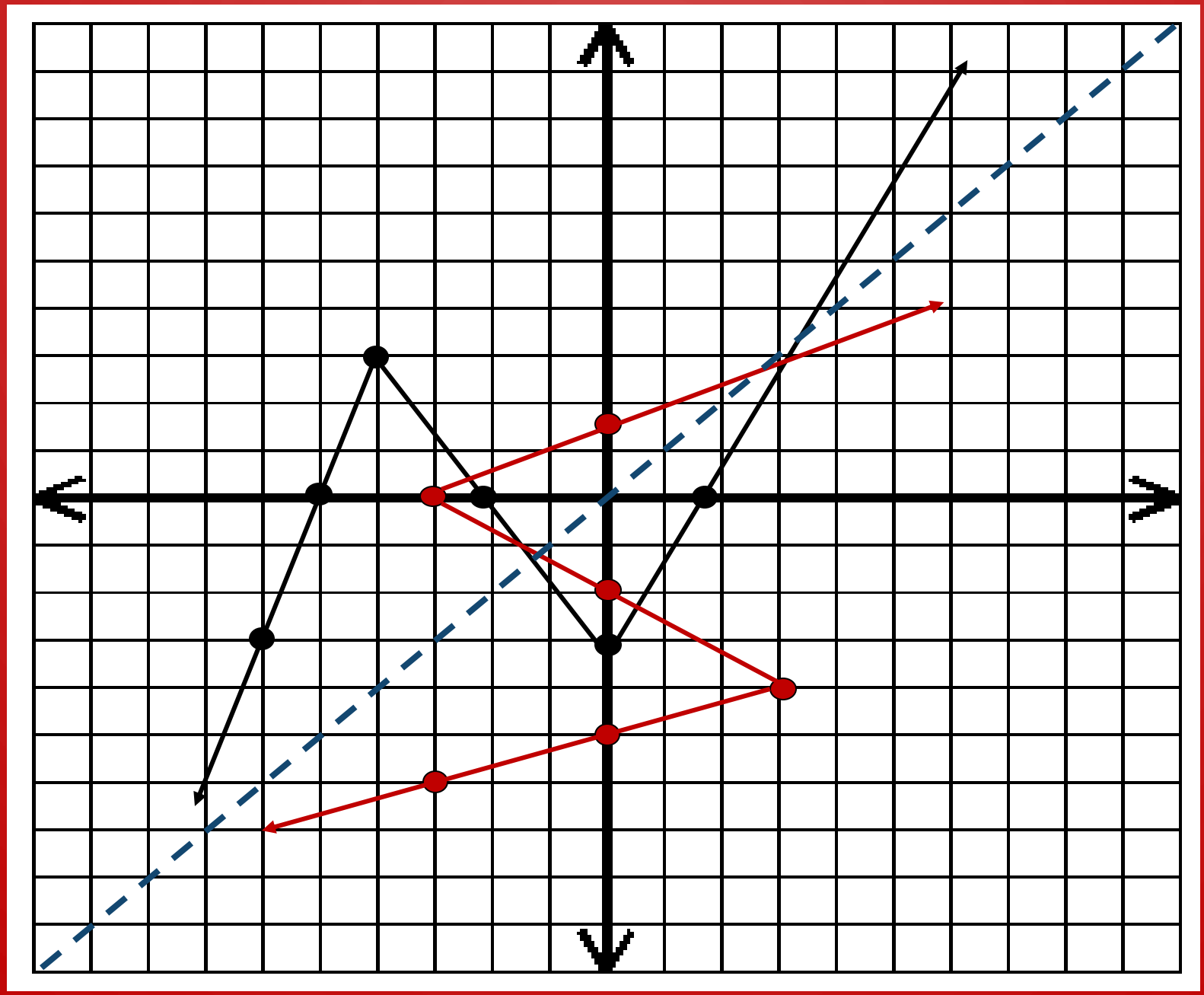
WHAT WE NEED:

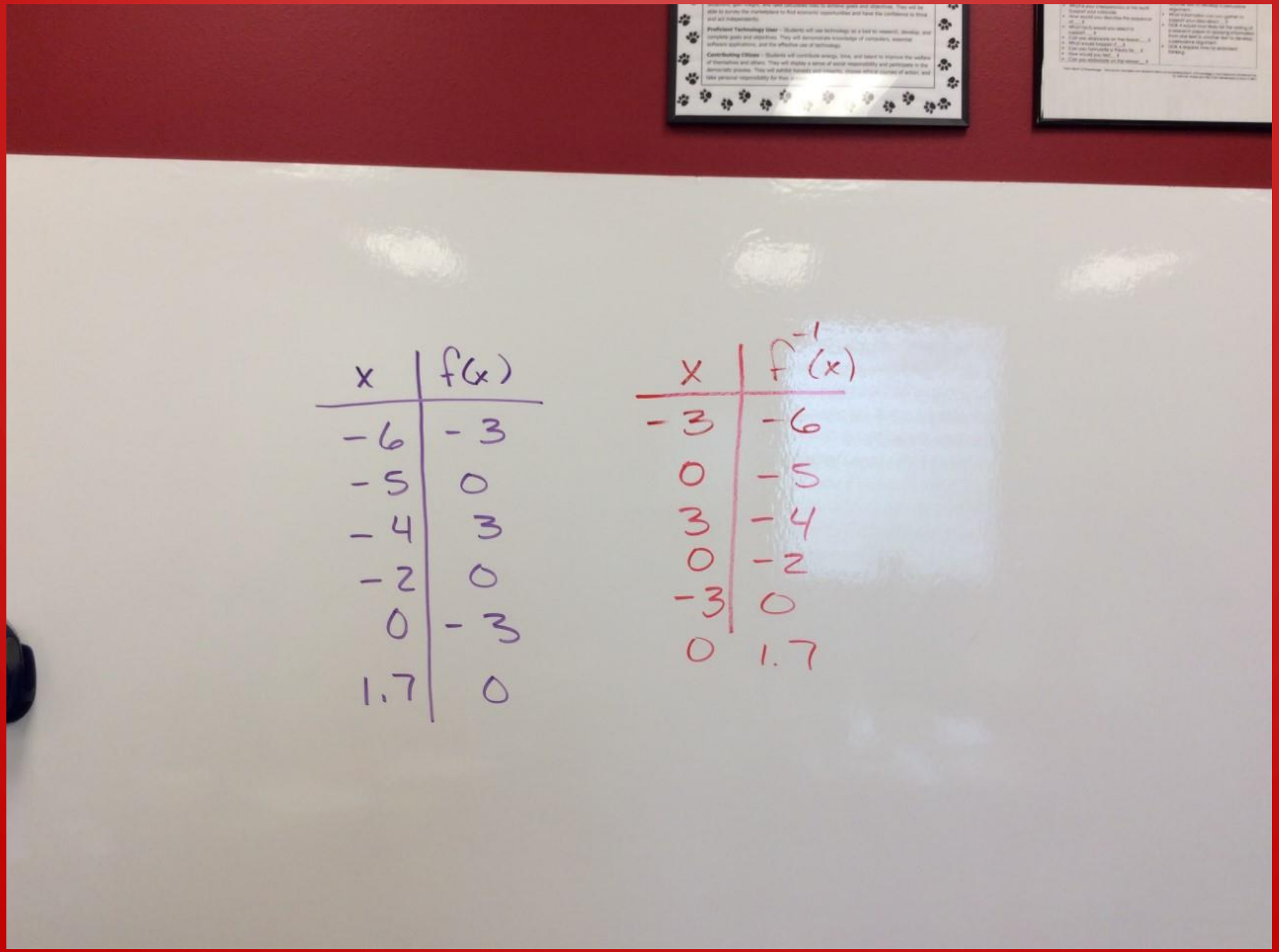
- TI – 84
- VLT
- HLT

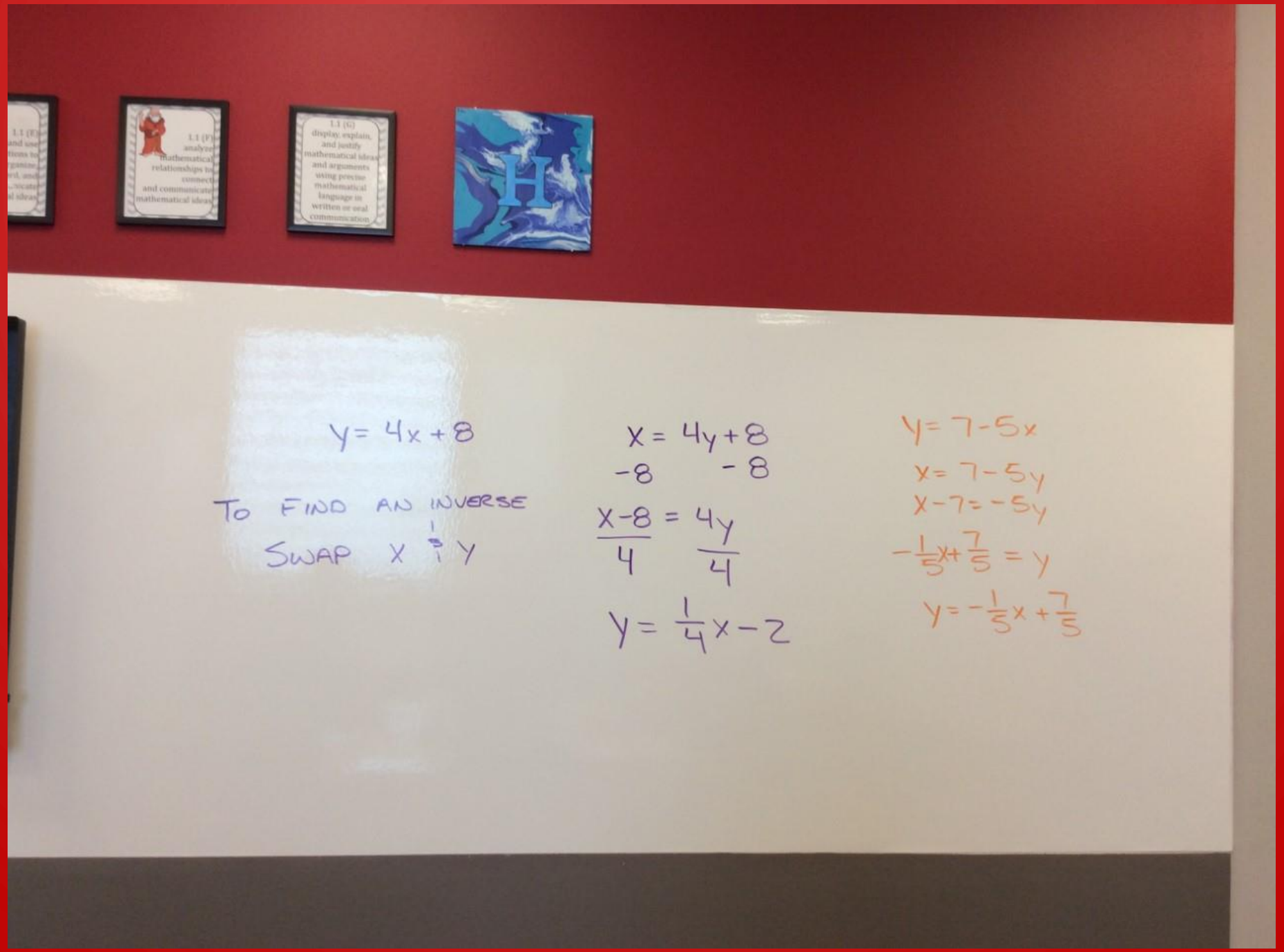
I WILL BE ABLE TO COMPLETE MY HOMEWORK GIVING THE

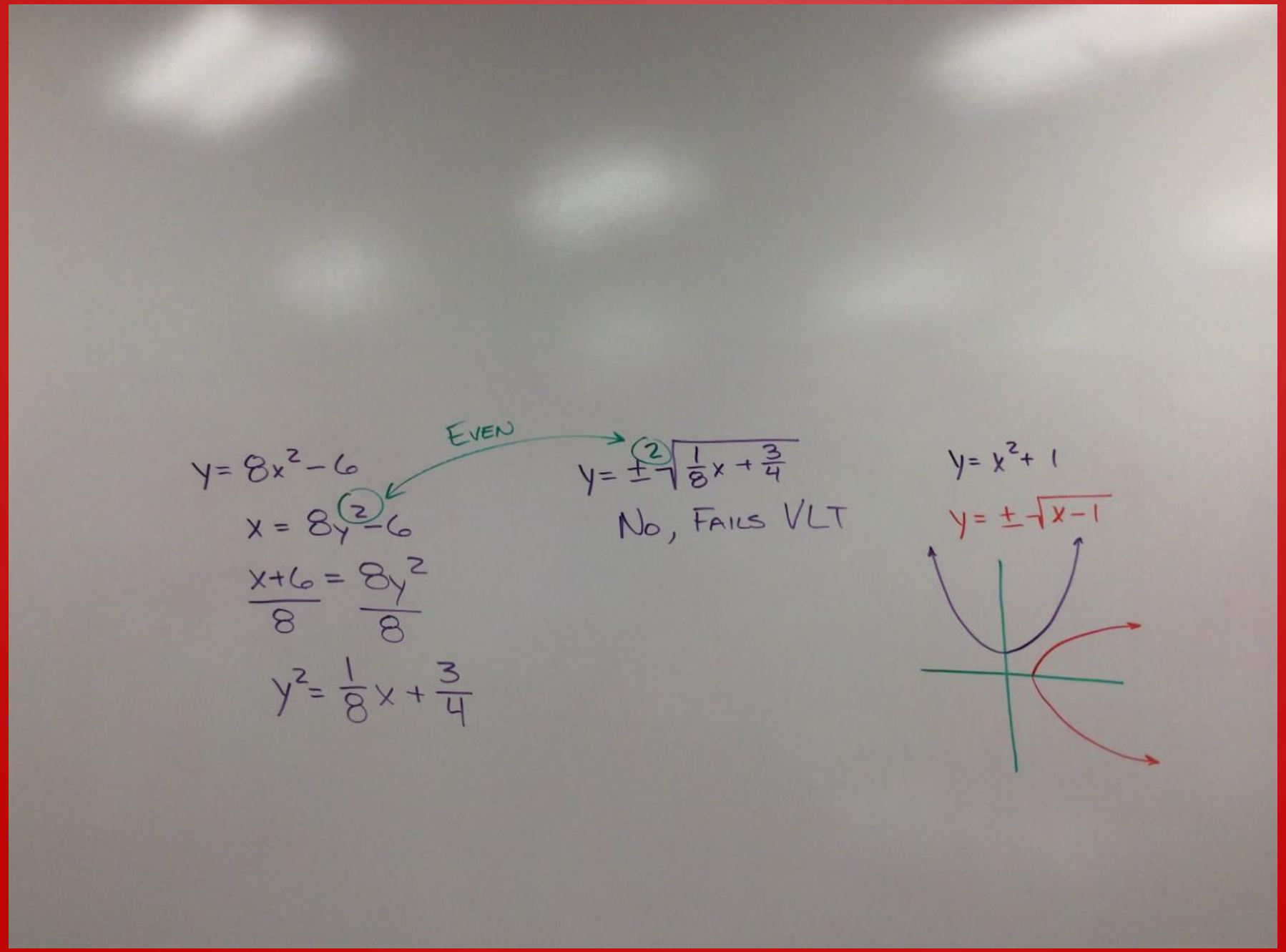
- Graph of the equation

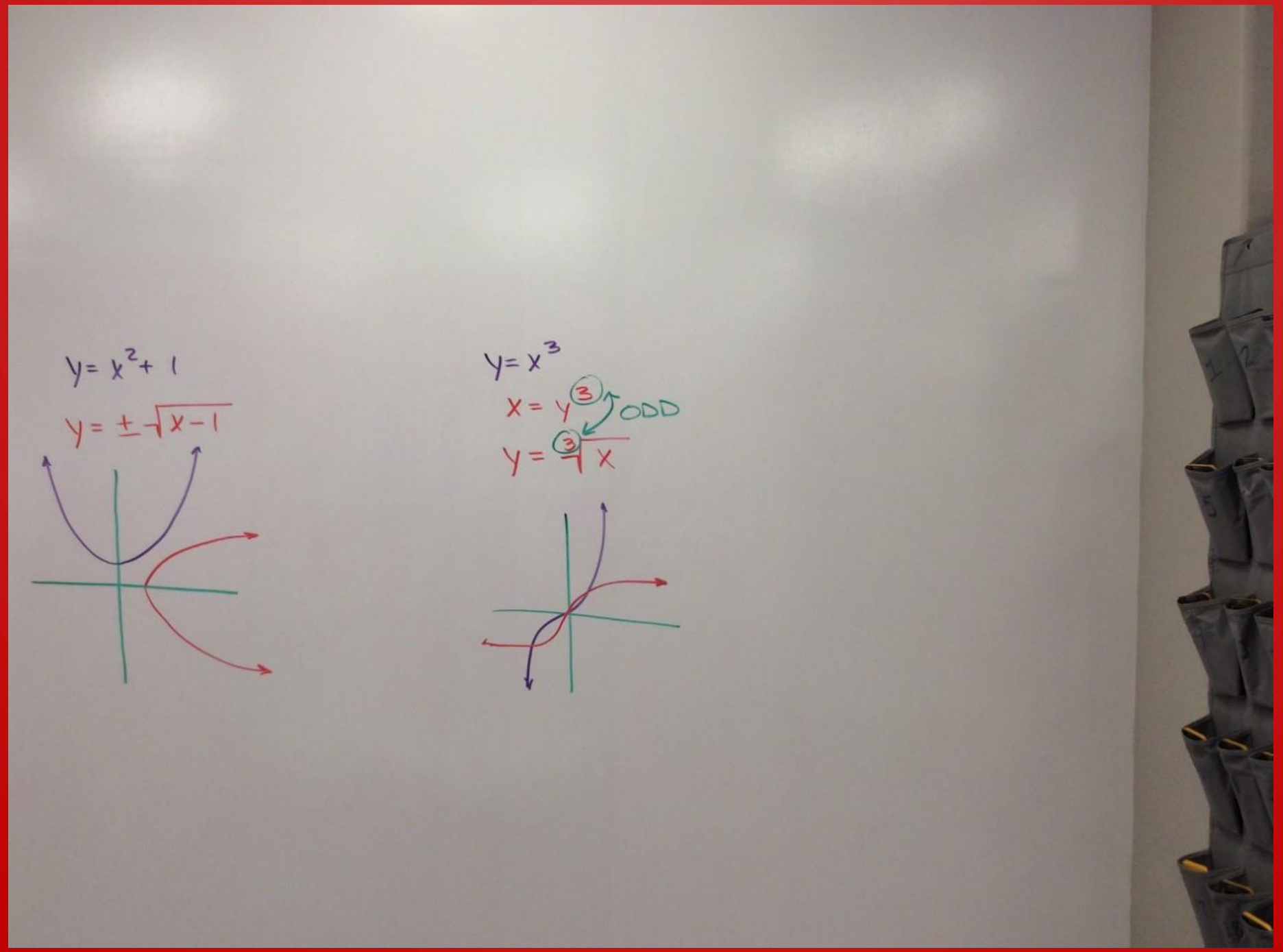





x | f(x)
-6 | -3
-5 | 0
-4 | 3
-2 | 0
0 | -3
1.7 | 0
x | f^-1(x)
-3 | -6
0 | -5
3 | -4
0 | -2
-3 | 0
0 | 1.7


y = 4x + 8
To find an inverse
Swap x ↔ y
x = 4y + 8
-8 -8
(x-8)/4 = 4y/4
y = 1/4 x - 2
y = 7 - 5x
x = 7 - 5y
x - 7 = -5y
-1/5 x + 7/5 = y
y = -1/5 x + 7/5


EVEN
$y = 8x^2 - 6$
$x = 8y^2 - 6$
$\frac{x+6}{8} = \frac{8y^2}{8}$
$y^2 = \frac{1}{8}x + \frac{3}{4}$
$y = \pm\sqrt{\frac{1}{8}x + \frac{3}{4}}$
No, FAILS VLT
$y = x^2 + 1$
$y = \pm\sqrt{x-1}$


$y = x^2 + 1$
$y = \pm\sqrt{x-1}$
$y = x^3$
$x = y^3$
ODD
$y = \sqrt[3]{x}$