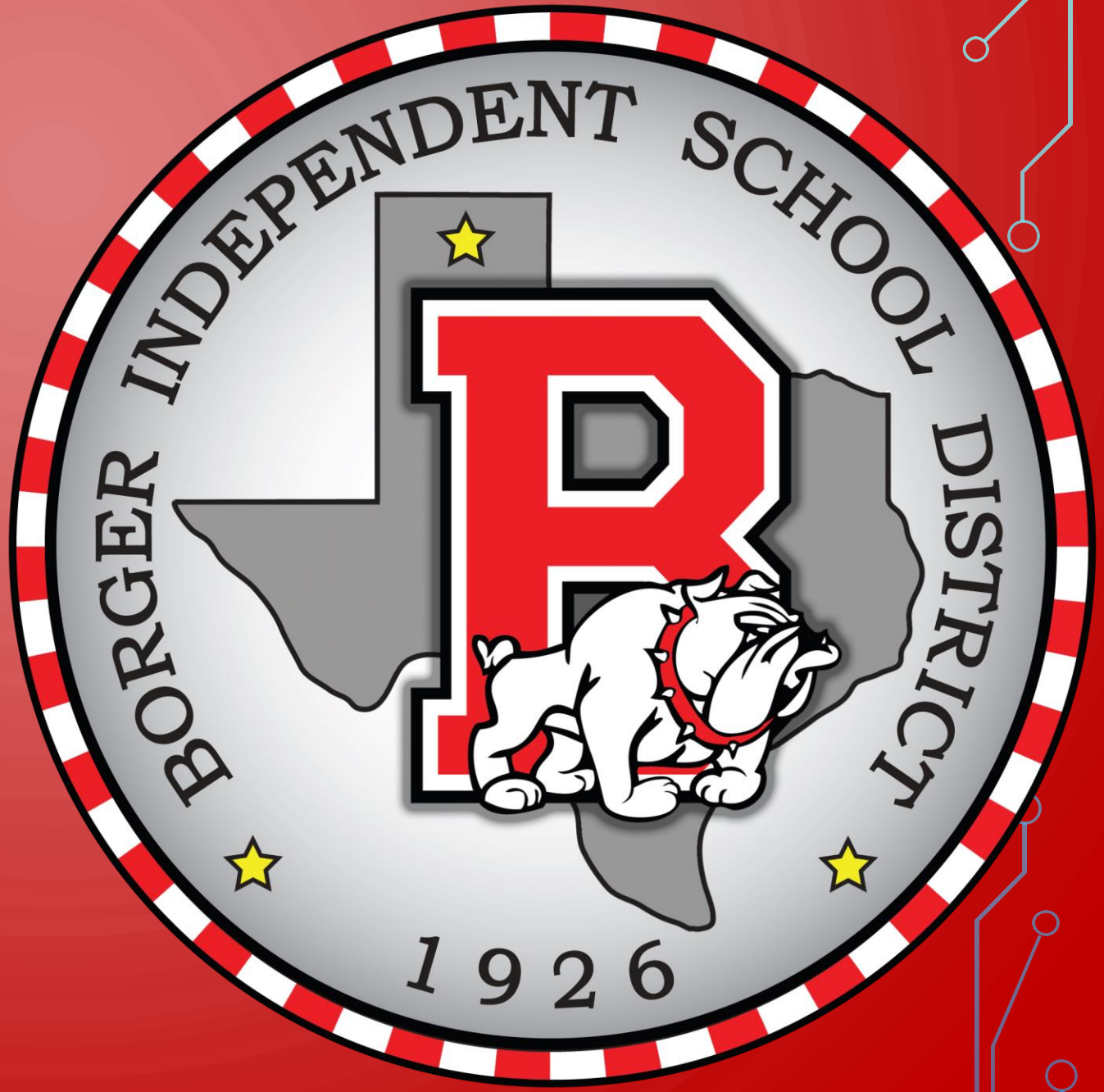
BOARD NOTES

27 AUGUST 2019



2A.2 (A) graph the functions $f(x) = x^2$, $f(x) = \sqrt{x} = \sqrt[2]{x}$, $f(x) = {}^1/_x$, $f(x) = \sqrt[3]{x}$, $f(x) = x^3$, $f(x) = |x|$, $f(x) = b^x$, $f(x) = \log_b x$ where b is 2, 10, and e, and, when applicable, analyze the key attributes such as domain, range, intercepts, symmetries, asymptotic behavior, and maximum and minimum given an interval;

2A.2 (D) use the composition of two functions, including the necessary restrictions on the domain, to determine if the functions are inverses of each other;

2A.7 (I) write the domain and range of a function in interval notation, inequalities, and set notation.

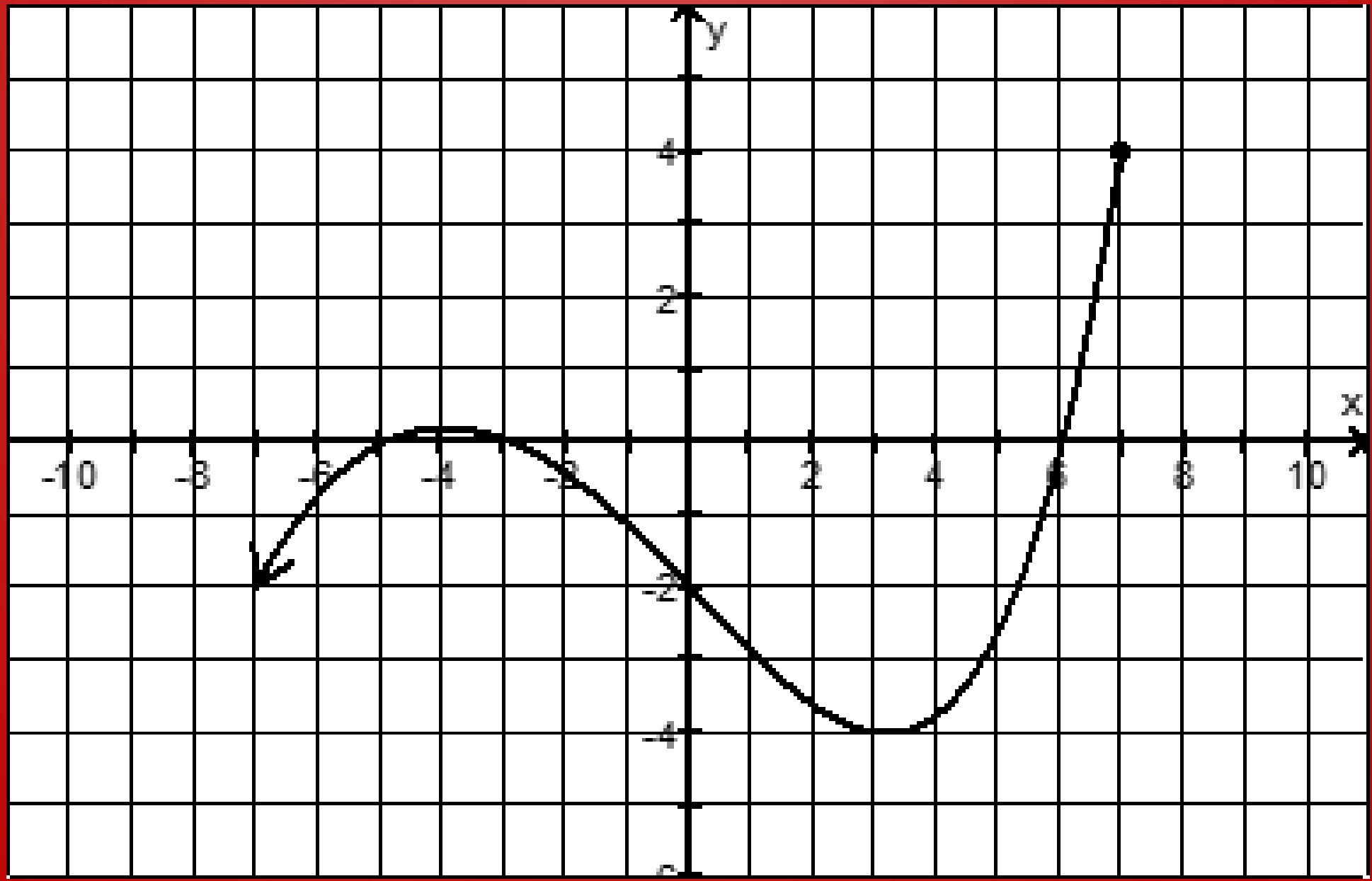
We will be able to analyze the key attributes of a graph including the domain, range, and intercepts.

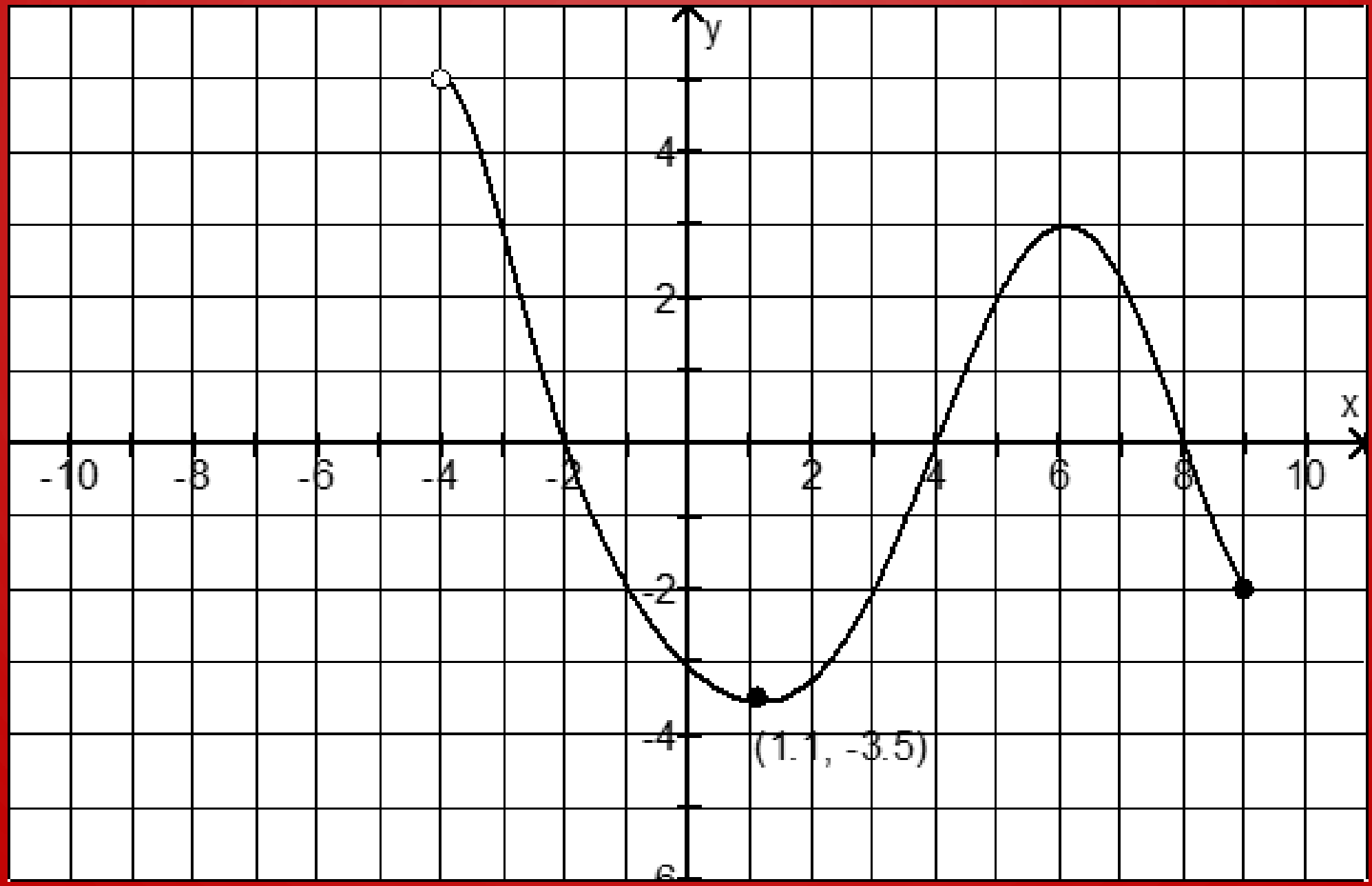
WHAT WE NEED:

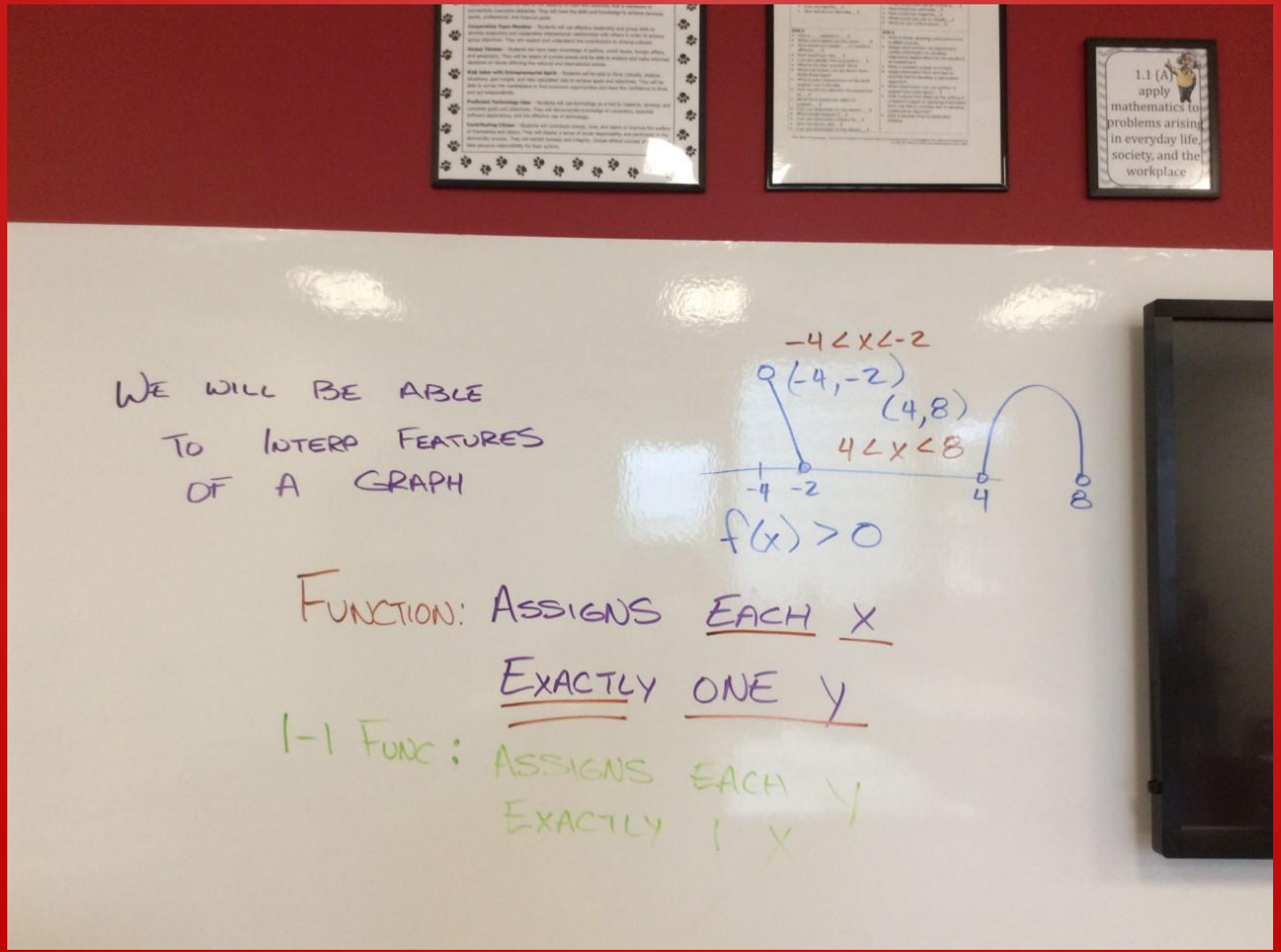
- TI – 84
- Definition of:
  - Domain
  - Range
  - Intercepts
  - Increasing vs Decreasing

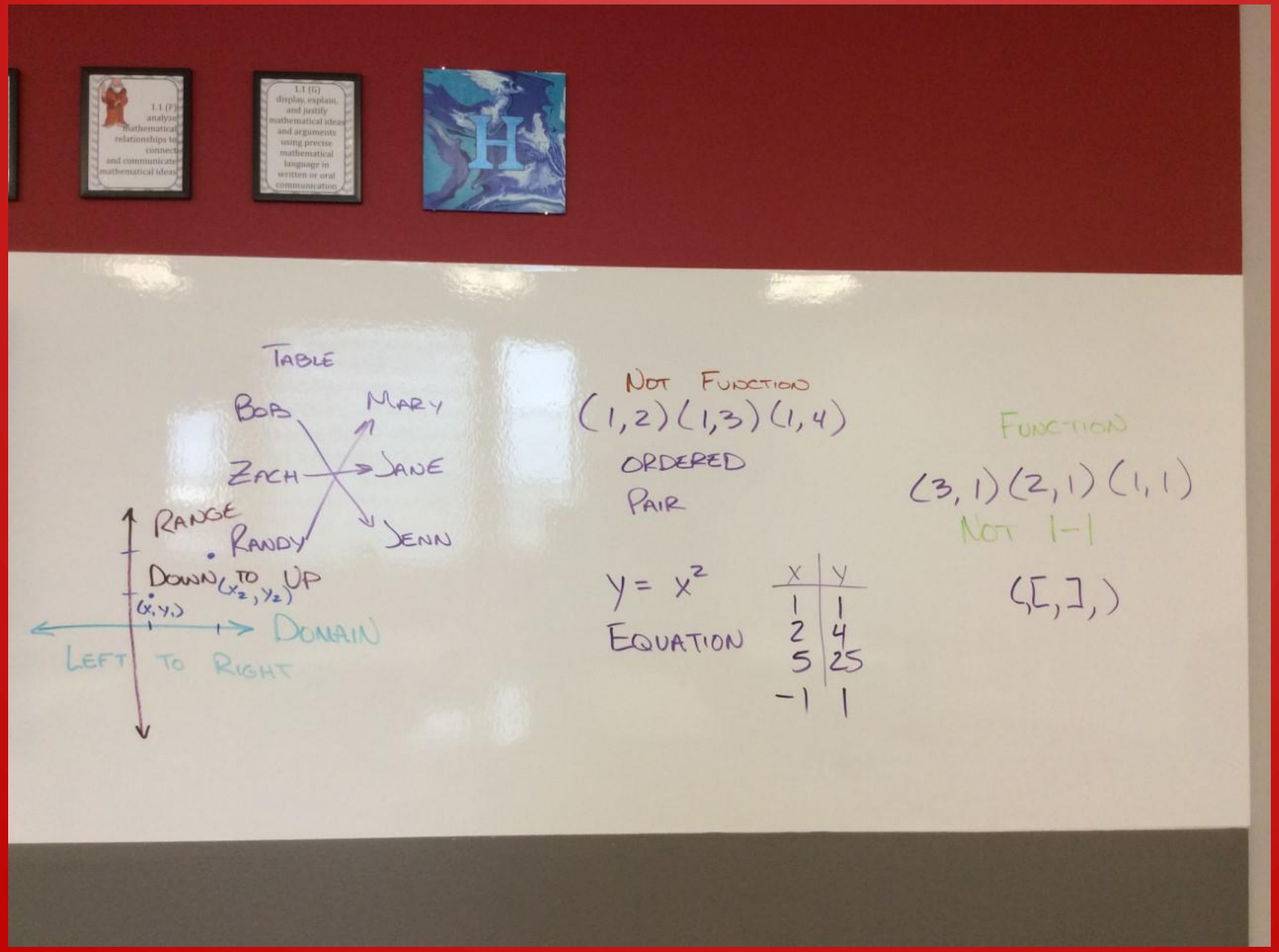
I WILL BE ABLE TO COMPLETE MY HOMEWORK GIVING THE

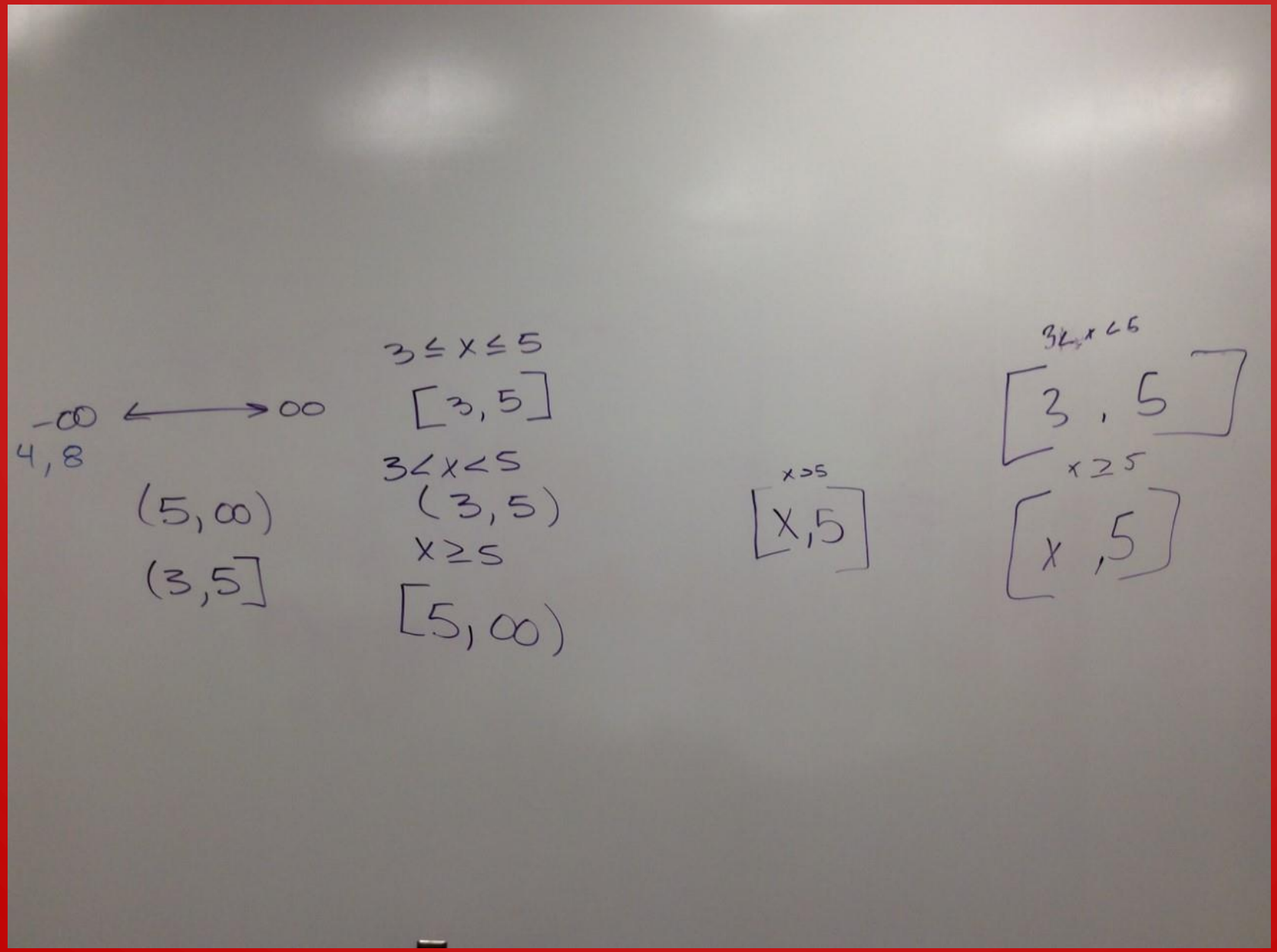
- Domain
- Range
- Intercepts (if any)
- Intervals of:
  - Increasing
  - Decreasing
  - Constant

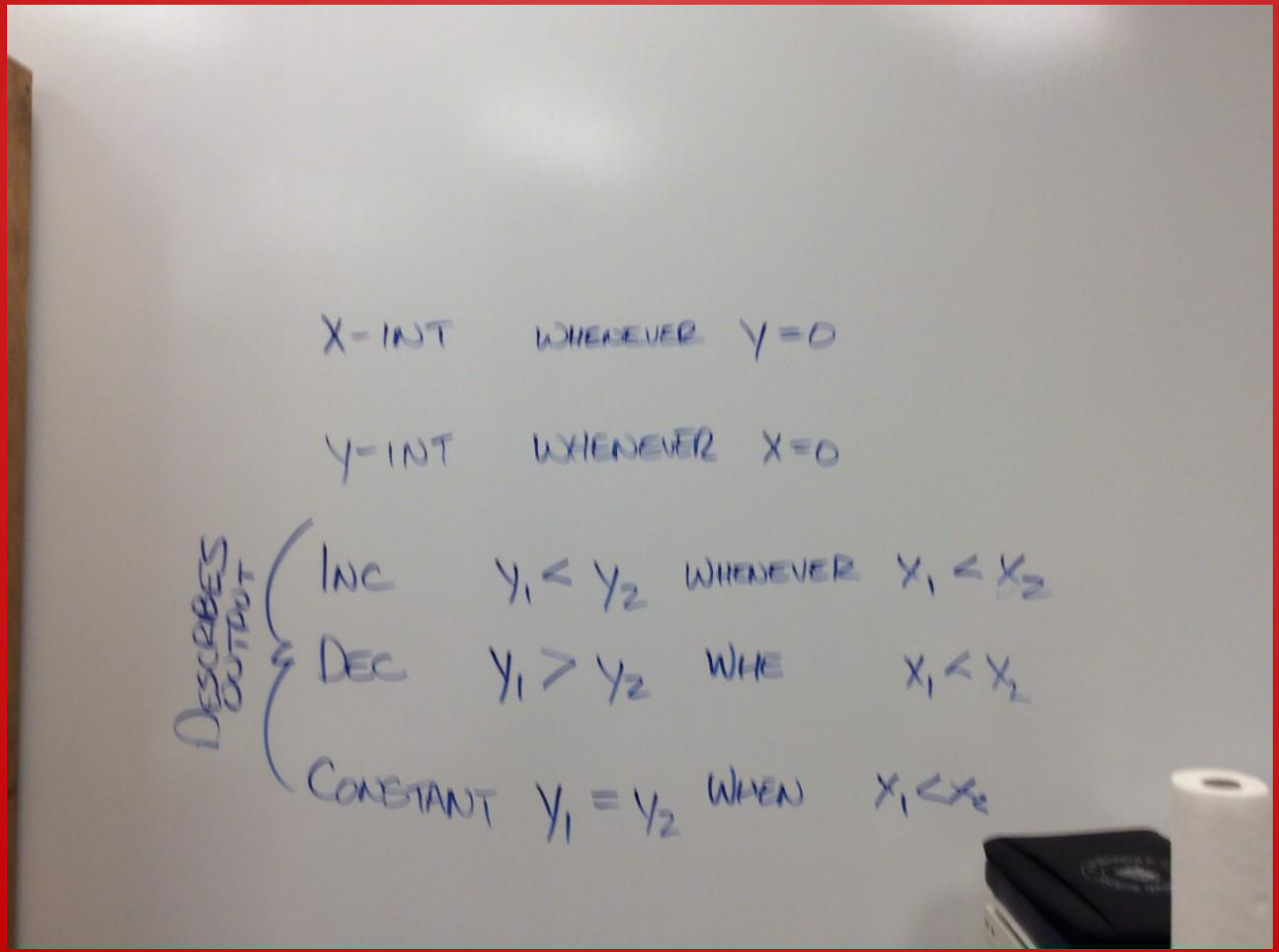

y
x
4
2
-2
-4
-10
-8
-6
-4
-2
2
4
6
8
10

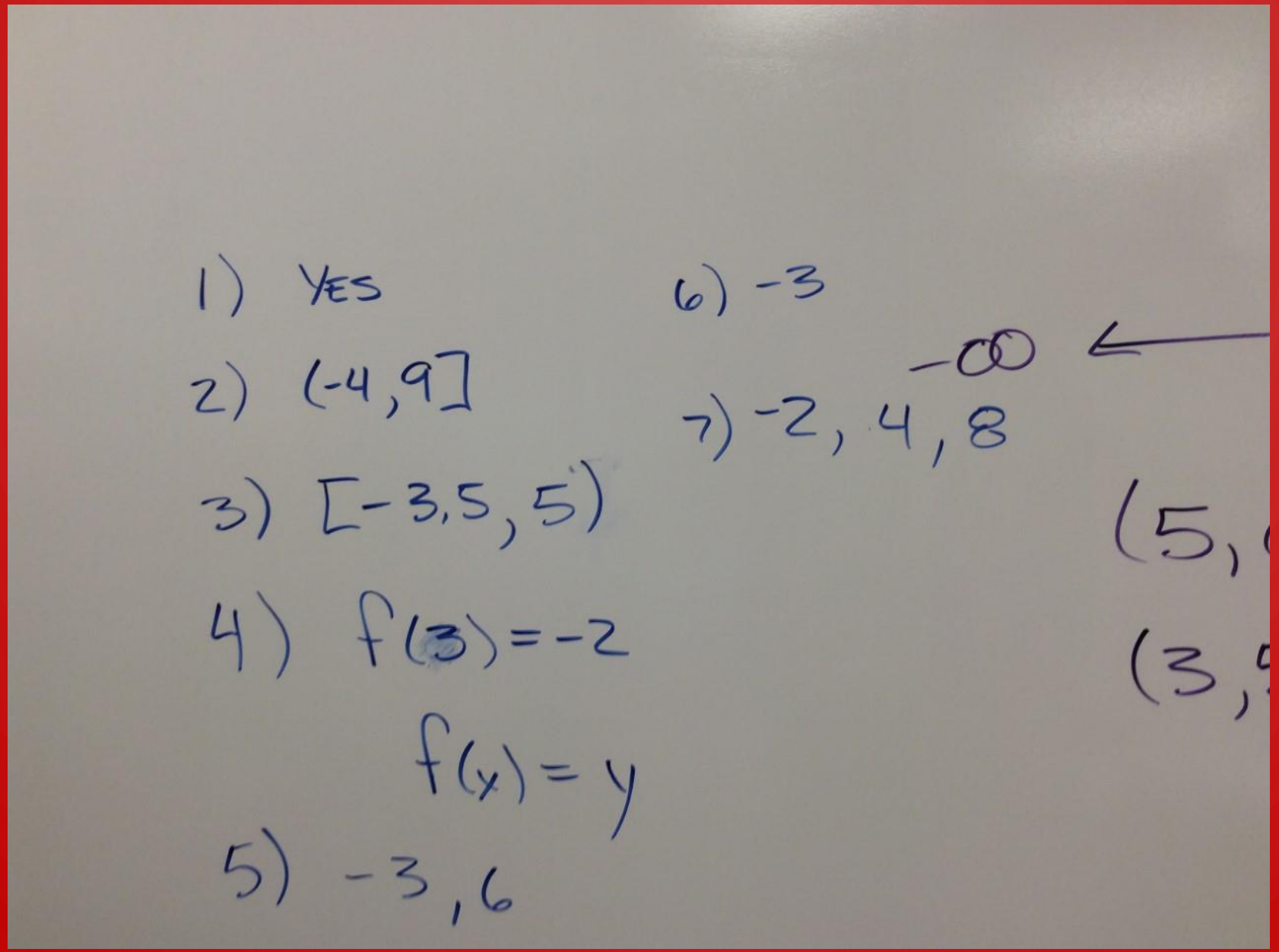

y
x
4
2
-2
-4
-10
-8
-6
-4
-2
2
4
6
8
10
(1.1, -3.5)


1.1 (A) apply mathematics to problems arising in everyday life, society, and the workplace
WE WILL BE ABLE TO INTERP FEATURES OF A GRAPH
-4 < x < -2
(-4,-2)
(4,8)
4 < x < 8
-4
-2
4
8
f(x) > 0
FUNCTION: ASSIGNS EACH X EXACTLY ONE Y
1-1 FUNC: ASSIGNS EACH Y EXACTLY 1 X


1.1 (F) analyze mathematical relationships to connect and communicate mathematical ideas
1.1 (G) display, explain, and justify mathematical ideas and arguments using precise mathematical language in written or oral communication
H
TABLE
BOB
MARY
ZACH
JANE
RANDY
JENN
RANGE
DOWN
TO
UP
(x_1, y_1)
(x_2, y_2)
DOMAIN
LEFT TO RIGHT
NOT FUNCTION
(1,2)(1,3)(1,4)
ORDERED PAIR
$y = x^2$
EQUATION
x | y
1 | 1
2 | 4
5 | 25
-1 | 1
FUNCTION
(3,1)(2,1)(1,1)
NOT 1-1
(,[,],)


$-\infty \longleftrightarrow \infty$
4,8
$(5,\infty)$
$(3,5]$
$3 \le x \le 5$
$[3,5]$
$3 < x < 5$
$(3,5)$
$x \ge 5$
$[5,\infty)$
$x > 5$
$[x,5]$
$3 < x < 5$
$[3,5]$
$x \ge 5$
$[x,5]$


X-INT WHENEVER Y=0
Y-INT WHENEVER X=0
DESCRIBES OUTPUT
INC $y_1 < y_2$ WHENEVER $x_1 < x_2$
DEC $y_1 > y_2$ WHE $x_1 < x_2$
CONSTANT $y_1 = y_2$ WHEN $x_1 < x_2$


1) YES
2) (-4,9]
3) [-3,5,5)
4) f(3)=-2
f(x)=y
5) -3,6
6) -3
-∞
7) -2, 4, 8
(5,
(3,