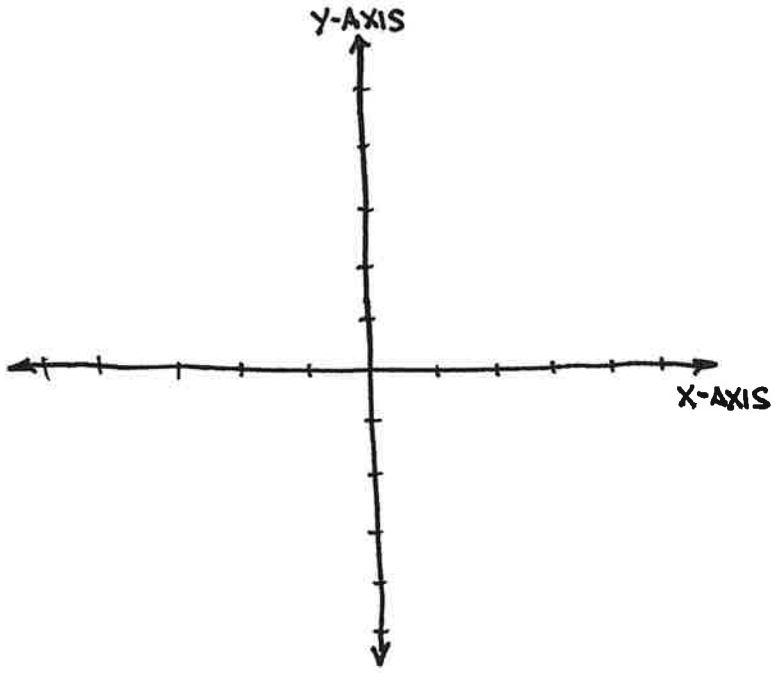
MATH 0482

Chapter 2.1 Relations, Graphs, and Functions



PLANE

ORDERED PAIR

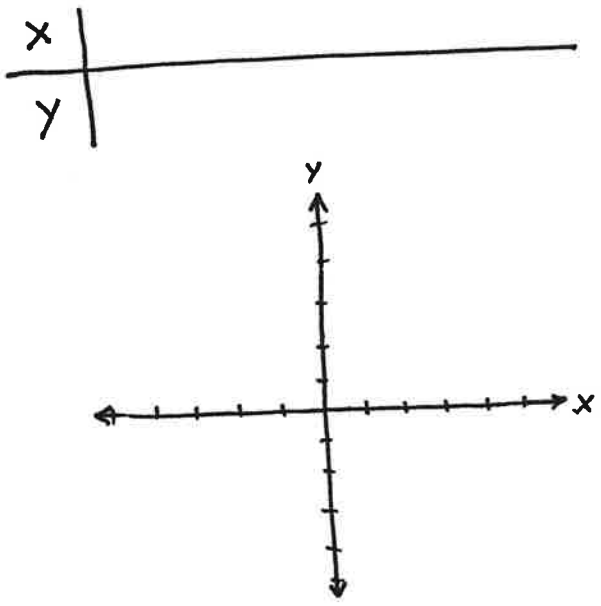
ORIGIN

QUADRANT

CARTESIAN COORDINATE SYSTEM : RENE DESCARTES (1596-1650)

RELATION : A SET OF ORDERED PAIRS

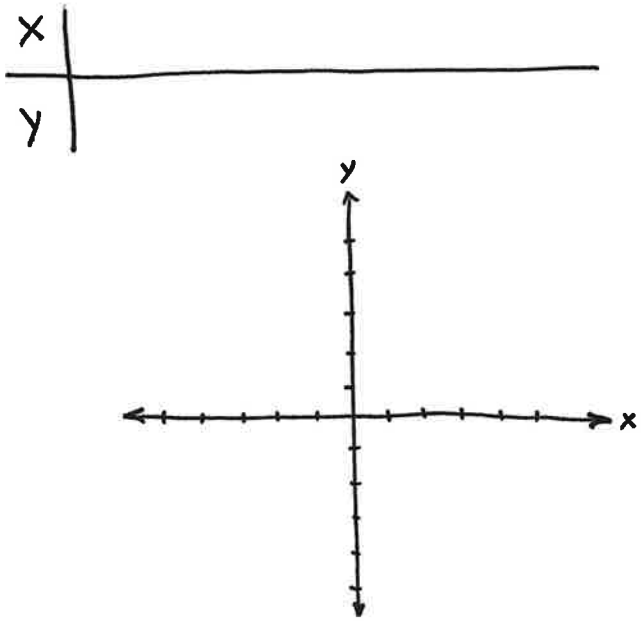
$y = |x| - 2$



DOMAIN :

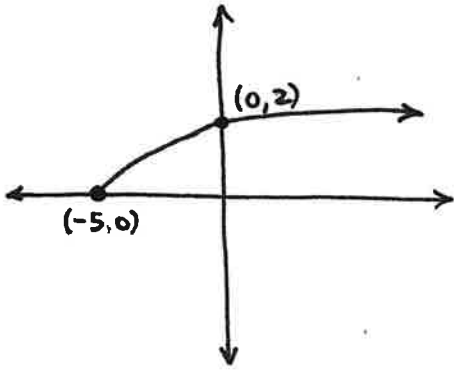
RANGE :

$x = |y| + 1$



DOMAIN :

RANGE :



DOMAIN:

RANGE:

FUNCTION: RELATION WHERE EVERY X-VALUE CORRESPONDS TO EXACTLY ONE y-VALUE

GIVEN THE RELATION, STATE THE DOMAIN, RANGE, AND DETERMINE IF IT IS A FUNCTION.

$\{(-1,4),(0,7),(2,3),(3,3),(4,-2)\}$

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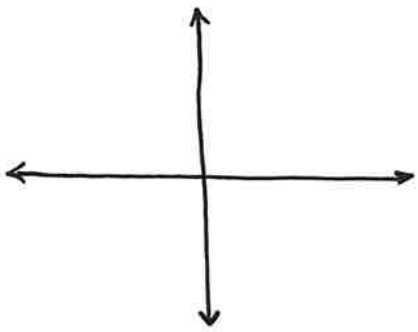
$\{(-4,-3),(-2,6),(0,3),(3,5),(3,7)\}$

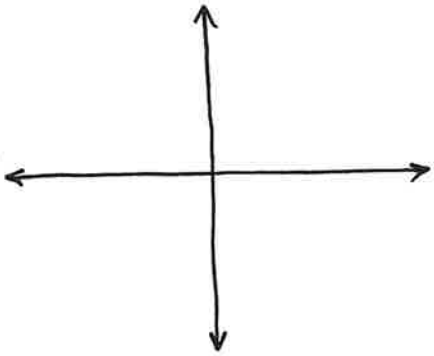
VERTICAL LINE TEST: A VERTICAL LINE INTERSECTS A FUNCTION AT A GIVEN X EXACTLY ONCE

$y=|x|-2$

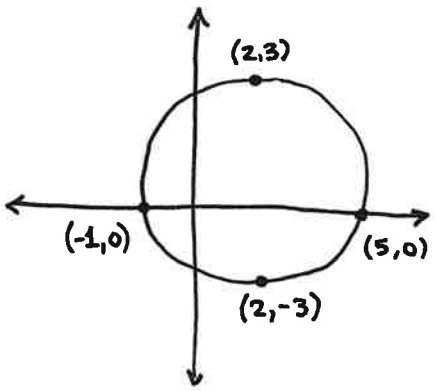


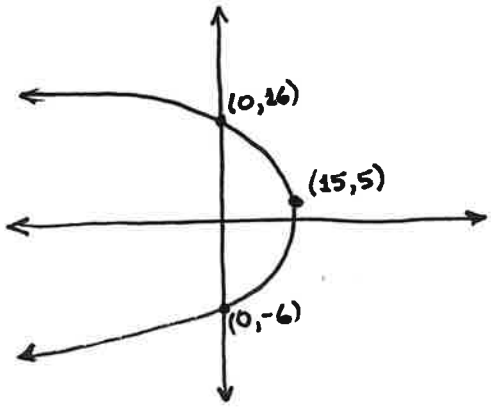
FUNCTION? DOMAIN RANGE

$x=|y|+1$



FUNCTION? DOMAIN RANGE





FUNCTION NOTATION: $f(x) = y$

$y = |x| - 2$

$f(-5) =$

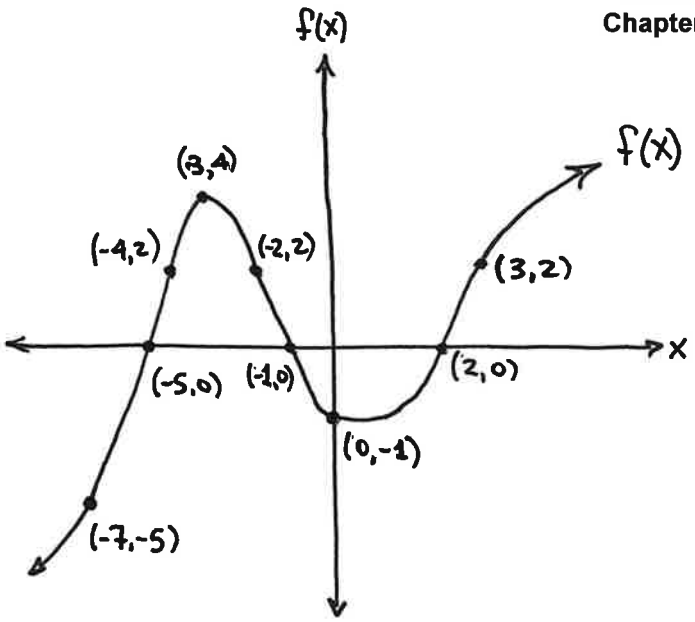
INPUT:
OUTPUT:

$g(x) = x^2$

$g(-2) =$ $\quad g\left(\frac{1}{2}\right) =$ $\quad g(x+h) =$

$f(x) = \sqrt{2x+4}$

$f(-2) =$ $\quad f(0) =$ $\quad f\left(\frac{1}{2}a^2 - 2\right) =$



$f(3) =$

$f(0) =$

$f(-7) =$

$f(x) = 2.\ x =$

$f(x) = 0.\ x =$