

FUNCTIONS + DOMAIN

Systems of Equation

$$2x + 3y = 13$$

$$4x - y = -9$$

$$\cancel{[A]}^{-1} \cdot \cancel{\begin{bmatrix} 2 & 3 \\ 4 & -1 \end{bmatrix}} \cdot \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 13 \\ -9 \end{bmatrix} \cdot \cancel{[A]}^{-1}$$

$$\begin{bmatrix} \dots \\ \dots \\ \dots \end{bmatrix}^{-1} \cdot \begin{bmatrix} \dots \\ \dots \end{bmatrix}$$

$$\begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 2 & 3 \\ 4 & -1 \end{bmatrix}^{-1} \cdot \begin{bmatrix} 13 \\ -9 \end{bmatrix}$$

Interval Notation

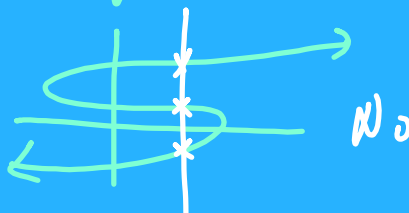
\cup Union

\cap Intersection

Function

$\{(-7, 8), (4, 3), (2, -7), (5, 3)\}$

yes



$y = \pm \sqrt{x+3}$ No

$y^2 + 2 = 4x^2 + 1$ Yes

$|x-4| = 2y + 3$ Yes

Not a func.
even

y
 $|y|$

$y = \pm \sqrt{\quad}$

3/ Find domain

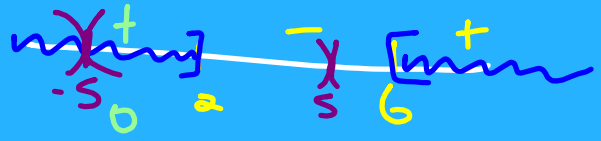


Domain: L to R
 $(-\infty, 2) \cup (2, \infty)$
 Range: Low to High
 $(-\infty, 3)$

Be prepared to fill in the domain chart on journal.

$$f(x) = \frac{\sqrt{x^2 - 8x + 12}}{x^2 - 25} \quad \frac{(x-6)(x-2)}{(x+5)(x-5)}$$

$x \neq 5, -5$



$$(-\infty, -5) \cup (-5, 2] \cup [6, \infty)$$