

Lesson 99: Graphing Absolute Values

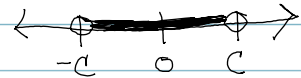
Step 1: Isolate the radical on left side

Step 2: Check for disjunction or conjunction

A. Conjunction: (and)

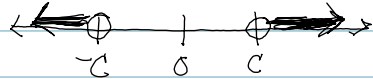
$|x| < c$, then $-c < x < c$

Assume Domain = \mathbb{R}



B. Disjunction: (or)

$|x| > c$, then $x < -c$ or $x > c$



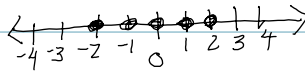
Beware of Trick Questions:

1. $|x| < -2$ Domain = \mathbb{R} \emptyset

2. $|x| - 5 > -3$
 $-|x| > 2$
 $|x| < -2$ \emptyset

Example 99.2

$-|x| + 3 > 0$ D = Integers
 $-|x| > -3$
 $|x| < 3$
 $-3 < x < 3$



Example 99.3

$-|x| + 2 < -2$ D = \mathbb{R}
 $-|x| < -4$
 $|x| > 4$
 $x < -4$ or $x > 4$

