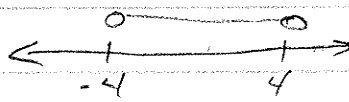


Quiz back
Check answers

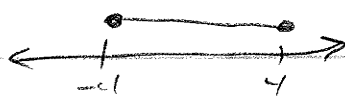
Warm-up w/ $|x-3|=12$ $|4-x|=7$ $|2x-3|=9$

1.7 b Absolute Value Inequalities

Less Than AND $|x| < 4$ $-3, -3.9, 0, 1, 3.99, 2$
 $\rightarrow -4 < x < 4$




$|x| \leq 4$ $-4, -3, \dots, 3, 3.9, 4$
 $\rightarrow -4 \leq x \leq 4$




Greater OR

$|x| > 3$ $4, 3.1, 6, 10, 12, 100, \dots > 3$
 $-4, -6, -100, -3000, \dots < -3$



$x > 3$ or $x < -3$

$|x| \geq 3$ $3, 4, 5, 6, \dots \geq 3$
 $-3, -3.5, -200, \dots \leq -3$



$x \geq 3$ or $x \leq -3$

In General

$|ax+b| < c \rightarrow -c < ax+b < c$



$|ax+b| > c \rightarrow ax+b > c$ or $ax+b < -c$



Examples - Solve & graph

Greater OR

(a) $|x| \geq 5$

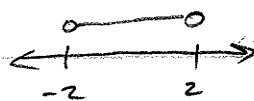
$x \geq 5$ or $x \leq -5$



And

(b) $|x| < 2$ $x < 2$ & $x > -2$

$-2 < x < 2$



(c) $|4x+5| > 13$

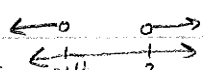
$4x+5 > 13$ or $4x+5 < -13$

$4x > 8$

$x > 2$

$4x < -18$

$x < -4\frac{1}{2}$



(d) $|2x-7| \leq 1$

$-1 \leq 2x-7 \leq 1$

$6 \leq 2x \leq 8$

$3 \leq x \leq 4$



ps 43-51 odd, 52, 55, 59, 66-69, 84, 85