1. Solve the inequalities $8 < 1 + |7 - 2x|$
express your solution sets using interval notation.

$(0,7)$

$[0,7]$

$(-\infty,0) \cup (7,+\infty)$

$(-\infty,0] \cup [7,+\infty)$

Solution

Intervals

Solve:

$8 < |7 - 2x| + 1$

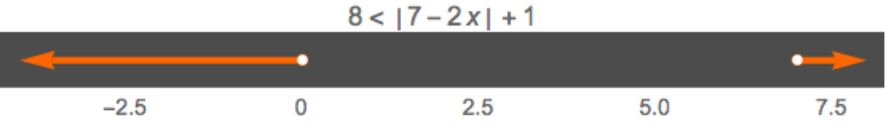
$7 < |7 - 2x|$

$7 < 7 - 2x$ or $7 - 2x < -7$

$7 - (7) < -2x$ or $-2x < -7 - (7)$

$0 < -2x$ or $-2x < -14$

Divide each side by -2 and flip the inequalities



$x < 0$ or $x > 7$