6. Solve the inequalitie $-6 \leqslant 2-8x \leqslant 6$
express your solution sets using interval notation.

$\left(-\frac{1}{2}, 1\right)$

$(-\infty, -\frac{1}{2}) \cup (1, +\infty)$

$\left[-\frac{1}{2}, 1\right]$

$(-\infty, -\frac{1}{2}] \cup [1, +\infty)$

Solution

Intervals

Solve:

$|2-8x|+1 \leq 7$

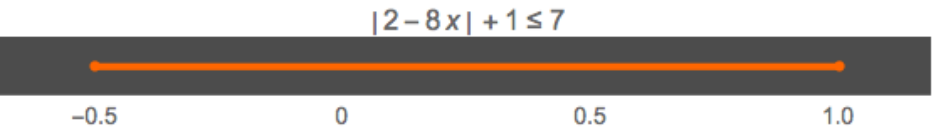
$|2-8x| \leq 6$

$-6 \leqslant 2-8x \leqslant 6$

$-6-(2) \leqslant -8x \leqslant 6-(2)$

$-8 \leqslant -8x \leqslant 4$

Divide each side by -8 and flip the inequalities



$-\frac{1}{2} \leq x \leq 1$