5. Solve the inequalitie $-6 \leqslant 7-2x \leqslant 6$

express your solution sets using interval notation.

$(\frac{1}{2}, \frac{13}{2})$

$(-\infty, \frac{1}{2}) \cup (\frac{13}{2}, +\infty)$

$[\frac{1}{2}, \frac{13}{2}]$

$(-\infty, \frac{1}{2}] \cup [\frac{13}{2}, +\infty)$

Solution

Intervals

Solve:

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

$|7-2x| \leq 6$

$-6 \leqslant 7-2x \leqslant 6$

$-6-(7) \leqslant -2x \leqslant 6-(7)$

$-13 \leqslant -2x \leqslant -1$

Divide each side by -2 and flip the inequalities

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

$\frac{1}{2} \leq x \leq \frac{13}{2}$