8. Solve the inequalitie $-6 < 10 - 4x < 6$
express your solution sets using interval notation.

$[1,4]$

$(-\infty,1) \cup (4,+\infty)$

$(1,4)$

$(-\infty,1] \cup [4,+\infty)$

Solution

Intervals

Solve:

$|10 - 4x| + 1 < 7$

$|10 - 4x| < 6$

$-6 < 10 - 4x < 6$

$-6 - (10) < -4x < 6 - (10)$

$-16 < -4x < -4$

Divide each side by -4 and flip the inequalities

$|10-4x|+1 < 7$

$1 < x < 4$