8. Solve the inequalitie $-6 \leqslant 3 - 10\,x \leqslant 6$
express your solution sets using interval notation.

$(-\frac{3}{10}, \frac{9}{10})$

$(-\infty, -\frac{3}{10}) \cup (\frac{9}{10}, +\infty)$

$[-\frac{3}{10}, \frac{9}{10}]$

$(-\infty, -\frac{3}{10}] \cup [\frac{9}{10}, +\infty)$

Solution

Intervals

Solve:
$|3 - 10\,x| + 1 \leq 7$
$|3 - 10\,x| \leq 6$
$-6 \leqslant 3 - 10\,x \leqslant 6$
$-6 - (3) \leqslant -10\,x \leqslant 6 - (3)$
$-9 \leqslant -10\,x \leqslant 3$
Divide each side by -10 and flip the inequalities

$|3-10x| +1 \leq 7$

$-\frac{3}{10} \leq x \leq \frac{9}{10}$