8. Solve the inequalities $8 \le 2 + 7|x|$
express your solution sets using interval notation.

$(-\frac{6}{7}, \frac{6}{7})$

$[-\frac{6}{7}, \frac{6}{7}]$

$(-\infty, -\frac{6}{7}] \cup [\frac{6}{7}, +\infty)$

$(-\infty, -\frac{6}{7}) \cup (\frac{6}{7}, +\infty)$

Solution

Intervals

Solve:

$8 \le 7|x| + 2$

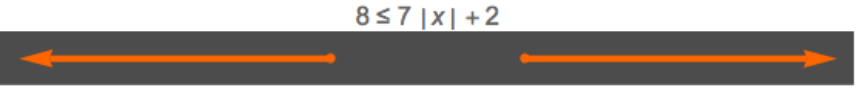
$6 \le 7|x|$

$6 \leqslant 7x$ or $7x \leqslant -6$

$6 - (0) \leqslant 7x$ or $7x \leqslant -6 - (0)$

$6 \leqslant 7x$ or $7x \leqslant -6$

Divide each side by 7



$x \le -\frac{6}{7}$ or $x \ge \frac{6}{7}$