3. Solve the inequalities $10 < 2 + |7x + 8|$
express your solution sets using interval notation.

$(-\frac{16}{7}, 0)$

$[-\frac{16}{7}, 0]$

$(-\infty, -\frac{16}{7}) \cup (0, +\infty)$

$(-\infty, -\frac{16}{7}] \cup [0, +\infty)$

Solution

Intervals

Solve:

$10 < |7x + 8| + 2$

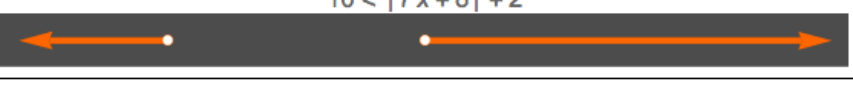
$8 < |7x + 8|$

$8 < 7x + 8$ or $7x + 8 < -8$

$8 - (8) < 7x$ or $7x < -8 - (8)$

$0 < 7x$ or $7x < -16$

Divide each side by 7



$x < -\frac{16}{7}$ or $x > 0$