7. Solve the inequalities $5 < 3 + |8x - 10|$
express your solution sets using interval notation.

$(1, \frac{3}{2})$

$[1, \frac{3}{2}]$

$(-\infty, 1) \cup (\frac{3}{2}, +\infty)$

$(-\infty, 1] \cup [\frac{3}{2}, +\infty)$

Solution

Intervals

Solve:

$5 < |8x - 10| + 3$

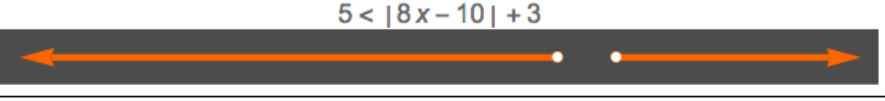
$2 < |8x - 10|$

$2 < 8x - 10$ or $8x - 10 < -2$

$2 - (-10) < 8x$ or $8x < -2 - (-10)$

$12 < 8x$ or $8x < 8$

Divide each side by 8



$x < 1$ or $x > \frac{3}{2}$