

5. Solve the inequalities $|5 - 6x| + 3 < 7$
express your solution sets using interval notation.

$$\left[\frac{1}{6}, \frac{3}{2}\right]$$

$$\left(-\infty, \frac{1}{6}\right) \cup \left(\frac{3}{2}, +\infty\right)$$

$$\left(\frac{1}{6}, \frac{3}{2}\right)$$

$$\left(-\infty, \frac{1}{6}\right] \cup \left[\frac{3}{2}, +\infty\right)$$

Solution

Intervals

Solve:

$$|5 - 6x| + 3 < 7$$

$$|5 - 6x| < 4$$

$$-4 < 5 - 6x < 4$$

$$-4 - (5) < -6x < 4 - (5)$$

$$-9 < -6x < -1$$

Divide each side by -6 and flip the inequalities

$$|5 - 6x| + 3 < 7$$

$$\frac{1}{6} < x < \frac{3}{2}$$

