

4. Solve the inequality  $-3 < 1 - 8x < 3$   
express your solution sets using interval notation.

$$\left[-\frac{1}{4}, \frac{1}{2}\right]$$

$$\left(-\infty, -\frac{1}{4}\right) \cup \left(\frac{1}{2}, +\infty\right)$$

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**Solution**

**Intervals**

Solve:

$$|1 - 8x| + 3 < 6$$

$$|1 - 8x| < 3$$

$$-3 < 1 - 8x < 3$$

$$-3 - (1) < -8x < 3 - (1)$$

$$-4 < -8x < 2$$

Divide each side by  $-8$  and flip the inequalities

$$|1 - 8x| + 3 < 6$$



$$-\frac{1}{4} < x < \frac{1}{2}$$