

9. Solve the inequality $-3 < 2 - 5x < 3$

express your solution sets using interval notation.

$$\left[-\frac{1}{5}, 1\right]$$

$$\left(-\infty, -\frac{1}{5}\right) \cup (1, +\infty)$$

$$\left(-\frac{1}{5}, 1\right)$$

$$\left(-\infty, -\frac{1}{5}\right] \cup [1, +\infty)$$

Solution

Intervals

Solve:

$$|2 - 5x| + 3 < 6$$

$$|2 - 5x| < 3$$

$$-3 < 2 - 5x < 3$$

$$-3 - (2) < -5x < 3 - (2)$$

$$-5 < -5x < 1$$

Divide each side by -5 and flip the inequalities

$$|2 - 5x| + 3 < 6$$

-0.25 0 0.25 0.50 0.75 1.00

$$-\frac{1}{5} < x < 1$$