

8. Solve the inequality  $-6 < 2x + 7 < 6$

express your solution sets using interval notation.

$$\left[-\frac{13}{2}, -\frac{1}{2}\right]$$

$$\left(-\infty, -\frac{13}{2}\right) \cup \left(-\frac{1}{2}, +\infty\right)$$

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**Solution**

**Intervals**

Solve:

$$|2x + 7| + 1 < 7$$

$$|2x + 7| < 6$$

$$-6 < 2x + 7 < 6$$

$$-6 - (7) < 2x < 6 - (7)$$

$$-13 < 2x < -1$$

Divide each side by 2

$$|2x + 7| + 1 < 7$$

$$-\frac{13}{2} < x < -\frac{1}{2}$$

