

1. Solve the inequalities $|7x + 5| + 2 < 8$
express your solution sets using interval notation.

$$\left[-\frac{11}{7}, \frac{1}{7}\right]$$

$$\left(-\infty, -\frac{11}{7}\right) \cup \left(\frac{1}{7}, +\infty\right)$$

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Solution

Intervals

Solve:

$$|7x + 5| + 2 < 8$$

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

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

$$-6 - (5) < 7x < 6 - (5)$$

$$-11 < 7x < 1$$

Divide each side by 7

$$|7x + 5| + 2 < 8$$

$$-\frac{11}{7} < x < \frac{1}{7}$$