[07-09-16-T10-Problems]

■ **Answer using interval notation.**

[1] $|2x| < 3x + 5$

[2] $|3x - 8| \geq 2x - 4$

[3] $|2(x + 5) - 3| \leq 3x + 2$

[4] $|\frac{x}{2} + 1| \geq 2x - 1$

[5] $|5 - x| = 2x - 1$

[6] $|x + 4| < x - 4$

[7] $|x + 4| > x - 4$

[8] $|10 - x| < 2(x - 1)$

[9] $|\frac{x+8}{3}| < \frac{3x+5}{2}$

■ **Answer using interval notation.**

[1] $x \in (-1, \infty +)$

[2] $x \in (-\infty, \frac{12}{5}] \bigcup [4, \infty +)$

[3] $x \in [5, \infty +)$

[4] $x \in (-\infty, \frac{4}{3}]$

[5] $x = 2$ equivalently $x \in [2, 2]$

[6] $x \in \emptyset$

[7] $x \in \mathbb{R}$ equivalently $x \in (-\infty, \infty +)$

[8] $x \in (4, \infty +)$

[9] $x \in (\frac{1}{7}, \infty +)$