ACMAT100 Spring 2025
Professor Manguba-Glover
Sections 2.5-2.6 Classwork (CW 4) Name: _____

Complete as many of the following problems as you can. You do not have to go in order. You can use a calculator to check your work but not to solve the problems.

If **your entire table** finishes early, you may leave early.

(1) Use interval notation to express the solution set and graph the set on a number line.

(a) $5x + 3 > 23$

(b) $2x + 4 > 10$

(c) $6(x + 1) + 4 \geq 5x + 17$

(d) $\frac{x}{3} - \frac{1}{12} \leq \frac{x}{4} + 1$

(2) Solve the compound inequalities and give your answer in interval notation:

(a) $-3 \leq x - 2 \leq 5$

(b) $5 < x + 5 < 8$

(c) $7x - 9 > -23$ and $5x + 8 < 23$

(d) $-5x + 6 \geq 21$ or $-7x - 5 < 9$

(3) Solve the absolute value equations and inequalities:

(a) $2|5x-1|-3=9$

(b) $|2x-5|=|x-4|$

(c) $|x-5|\geq 2$

(d) $4|x+3|-7<5$

Key:

(1) (a) $(4,\infty)$

(b) $(3,\infty)$

(c) $[7,\infty)$

(d) $(-\infty,13]$

(2) (a) $[-1,7]$

(b) $(0,3)$

(c) $(-2,3)$

(d) $(-\infty,-3]\cup(-2,\infty)$

(3) (a) $x=-1$ or $x=\frac{7}{5}$

(b) $x=1$ or $x=3$

(c) $(-\infty,3]\cup[7,\infty)$

(d) $(-6,0)$