

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) $5x + 3 > 23$	(c) $6(x + 1) + 4 \geq 5x + 17$
(b) $2x + 4 > 10$	(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) $-3 \leq x - 2 \leq 5$	(c) $7x - 9 > -23$ and $5x + 8 < 23$
(b) $5 < x + 5 < 8$	(d) $-5x + 6 \geq 21$ or $-7x - 5 < 9$

(3) Solve the absolute value equations:

(a) $2 5x - 1 - 3 = 9$	(b) $ 2x - 5 = x - 4 $
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Key:

(1) (a) $(4, \infty)$	(2) (a) $[-1, 7]$	(3) (a) $x = -1$ or $x = \frac{7}{5}$
(b) $(3, \infty)$	(b) $(0, 3)$	(b) $x = 1$ or $x = 3$
(c) $[7, \infty)$	(c) $(-2, 3)$	
(d) $(-\infty, 13]$	(d) $(-\infty, -3] \cup (-2, \infty)$	