

Absolute Value Equations and Inequalities

In problems 1-11, solve each absolute value equation.

1. $ x - 2 = 8$	2. $ 4x - 5 = 3$
3. $ -7x - 1 = 9$	4. $ x - 9 = -1$
5. $ 6x + 2 - 10 = 2$	6. $-3 x + 5 + 8 = 2$
7. $ 10x - 12 - 2 = -2$	8. $\left \frac{9x - 1}{7}\right = 4$
9. $ 7x + 1 = 4x - 3 $	10. $ 5x - 1 = -2x $
11. $ 3x + 1 = 4 - 3x $	

In problems 12-18, solve each absolute value inequality. Graph the solution set on a real number line.

12. $ x + 1 < 8$	13. $ x + 5 \leq 9$
14. $ 3x - 5 < 10$	15. $8 x + 4 < 16$
16. $-5 2x + 7 \geq -10$	17. $4 5x + 7 - 2 < 10$
18. $7 x + 3 + 5 < -9$	

In problems 19-23, solve each absolute value inequality. Graph the solution set on a real number line.

19. $ x - 8 > 10$	20. $ -5x \geq 10$
21. $5 x - 7 - 2 > -12$	22. $ -9x + 4 - 12 \geq 0$
23. $6 x - 7 > 10$	