

Day 06 A2 Solving Absolute Value Inequalities

Name _____

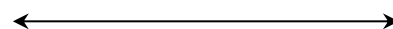
Date _____ Block _____

Solve each absolute value inequality. Graph the solution set and state it using set builder notation.

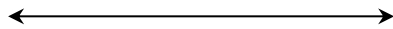
1. $|4x - 5| + 4 > 7x + 8$



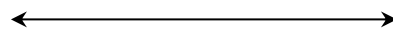
2. $7 + |9 - 5x| > 1$



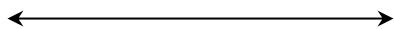
3. $-|x - 7| + 5 \geq 3x - 2$



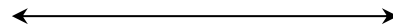
4. $|x + 2| - x \geq 0$



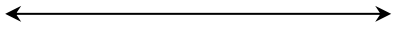
5. $|x + 5| > 12$



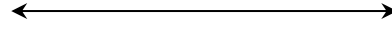
6. $3|2x - 4| - 6 \leq 21$



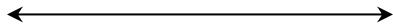
7. $-2|8x+28|+4 \leq -60$



8. $2|5x+1|+9 > 3$



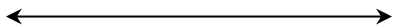
9. $-3|-2x-3|+5 > -16$



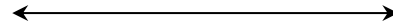
10. $-2\left|\frac{4}{3}x-5\right|-7 \geq 19$



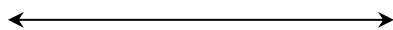
11. $6\left|\frac{5}{2}x-7\right|-\frac{2}{3} > 15$



12. $-4|-2x+5|-9 \leq 12$



13. $|8x+3|+17 \geq 11$



14. For a door to meet specifications at a carpentry shop, the width must be within $\frac{1}{4}$ inch of the expected width of the door. The shop gets an order for doors that are $4\frac{1}{2}$ feet wide. Which of the following is an inequality that expresses the range of widths for acceptable doors?

A. $|x+54| \leq \frac{1}{4}$

B. $\left|x+\frac{1}{4}\right| \leq 4\frac{1}{2}$

C. $|x-54| \leq \frac{1}{4}$

D. $\left|x-4\frac{1}{2}\right| \leq \frac{1}{4}$