

Absolute Value Equations and Inequalities Assignment

Solve each equation.

1. $|x - 5| = 9$

2. $|2x - 1| = 23$

3. $|x + 6| + 3 = 16$

4. $|x + 4| = 7$

5. $|6x - 3| = 27$

6. $|2x + 5| + 8 = 23$

Solve each inequality.

7. $|x + 3| < 18$

8. $|x - 4| \leq 18$

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

10. $|2x + 3| \geq 13$

11. $|5x + 2| - 9 \geq 18$

12. $|3x + 7| - 3 < 8$

Solve each inequality then graph its solution.

13. $|x + 4| < 9$



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14. $|3x - 1| - 2 \leq 12$



15. $|2x - 2.6| > 4$



16. $|4 + x| + 8 < 11$



For each graph, write an open sentence involving absolute value.



19. Ms. Smith' geometry class has a final grades range of 70 to 100. Write an absolute value inequality describing the range of the final grades.

20. Ultraviolet light has a frequency range of 0.8 PHz to 30 PHz Write an absolute value inequality describing the frequency range of ultraviolet light.