



Solve the absolute value equations:

1. $x + 5 = |3|$
2. $|x| = 7$
3. $|x - 4| = 5$
4. $|23 - x| = 23$
5. $|3x - 12| = 6$
6. $-|2x - 5| = -11$
7. $|x + 6| + 2 = 9$
8. $-|6x - 5| = -31$
9. $|x - 25| = 10$
10. $\left|\frac{x}{4} + 3\right| = 1$
11. $|x - 8| - 4 = 3$
12. $8|x + 1| = 24$
13. $7 - 3|2x - 3| = 1$

Solve the absolute value inequalities:

14. $4|x| \geq 32$
15. $-|x| \leq -19$
16. $|5x| \leq 45$
17. $|x| - 9 < -1$
18. $5 - |x| \leq 2$
19. $|9 - x| \leq 5$
20. $\left|\frac{1}{3}x - 4\right| \leq 10$
21. $|x - 8| \leq 6$
22. $|5x - 10| \geq 15$
23. $\left|\frac{1}{2}x - 8\right| \geq 50$

24. $|3x + 6| + 4 \geq 10$

25. $3|5x + 1| - 6 \geq 12$

Solve the absolute value equations:

1. $x + 5 = |3|$ solution: $x = -2$
2. $|x| = 7$ solution: $x = 7, -7$
3. $|x - 4| = 5$ solutions: $x = 9, -1$
4. $|23 - x| = 23$ solutions: $x = 0, 46$
5. $|3x - 12| = 6$ solutions: $x = 2, 6$
6. $-|2x - 5| = -11$ solutions: $x = 8, -3$
7. $|x + 6| + 2 = 9$ solutions: $x = 1, -13$
8. $-|6x - 5| = -31$ solutions: $x = 6, -13/3$
9. $|x - 25| = 10$ solutions: $x = 15, 35$
10. $\left|\frac{x}{4} + 3\right| = 1$ solutions: $x = -8, -16$
11. $|x - 8| - 4 = 3$ solutions: $x = 1, 15$
12. $8|x + 1| = 24$ solutions: $x = 2, -4$
13. $7 - 3|2x - 3| = 1$ solutions: $x = \frac{1}{2}, 5/2$

Solve the absolute value inequalities:

14. $4|x| \geq 32$ solution: $x \geq 8$ or $x \leq -8$
15. $-|x| \leq -19$ solution: $x \geq 19$ or $x \leq -19$
16. $|5x| \leq 45$ solution: $-9 \leq x \leq 9$
17. $|x| - 9 < -1$ solution: $-8 < x < 8$
18. $5 - |x| \leq 2$ solution: $-3 \leq x \leq 3$
19. $|9 - x| \leq 5$ solution: $4 \leq x \leq 14$
20. $\left|\frac{1}{3}x - 4\right| \leq 10$ solution: $-18 \leq x \leq 42$
21. $|x - 8| \leq 6$ solution: $2 \leq x \leq 14$
22. $|5x - 10| \geq 15$ solution: $x \geq 5$ or $x \leq -1$
23. $\left|\frac{1}{2}x - 8\right| \geq 50$ solution: $x \geq 116$ or $x \leq -84$
24. $|3x + 6| + 4 \geq 10$ solution: $x \geq 0$ or $x \leq -4$
25. $3|5x + 1| - 6 \geq 12$ solution: $x \geq 1$ or $x \leq -7/5$

