

Name : _____

Date : _____

Solving Absolute Value Inequalities

Solve the given inequalities. Write 'No Solution' where applicable.

① $-2|x - 1| - 5 \geq 4$

② $|10 + 4x| < 14$

③ $|3x - 12| \geq 6$

④ $|2x + 5| + 4 < 3$

⑤ $-5|2x + 2| - 3 \geq -3$

⑥ $3\left|\frac{1}{2}x + 2\right| + 6 < 15$

⑦ $-3 + |n - 2| > 5$

⑧ $\left|\frac{x}{6}\right| \geq 5$

⑨ $5 - 6|x + 7| \leq 17$

⑩ $3 - 2|3x - 1| \geq -7$

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Solving Absolute Value Inequalities

Answers

1 $-2|x - 1| - 5 \geq 4$

No solution

3 $|3x - 12| \geq 6$

$x \leq 2$ or $x \geq 6$

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

$x = -1$

7 $-3 + |n - 2| > 5$

$n < -6$ or $n > 10$

9 $5 - 6|x + 7| \leq 17$

$x \geq -9$ or $x \leq -5$

2 $|10 + 4x| < 14$

$-6 < x < 1$

4 $|2x + 5| + 4 < 3$

No solution

6 $3\left|\frac{1}{2}x + 2\right| + 6 < 15$

$-10 < x < 2$

8 $\left|\frac{x}{6}\right| \geq 5$

$x \leq -30$ or $x \geq 30$

10 $3 - 2|3x - 1| \geq -7$

$-\frac{4}{3} \leq x \leq 2$